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TECHNICAL REPORT
70-49-ES

ARTHROPODS OF MEDICAL IMPORTANCE IN EUROPE
(EXCLUSIVE OF THE EUROPEAN U.S.S.R.)

by

RENATO M. LABADAN, Ph.D.

and

B. V. TRAVIS, Ph.D.

College of Agriculture, Cornell University
Ithaca, New York

February 1970

Project Reference:
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Series
ES-55

U.S. Army Materiel Command
U.S. ARMY NATICK LABORATORIES
Natick, Massachusetts 01760

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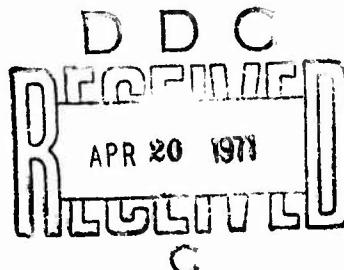
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OFFICE, CHIEF OF RESEARCH AND DEVELOPMENT
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FOREWORD

This report is one of the end-products of a series of studies that began in 1952 when the Office of The Quartermaster General awarded a contract to Cornell University for summarization of distributional data for insects and other arthropods of medical importance. The studies were planned in cooperation with personnel of the Office of the Surgeon General and the U. S. Department of Agriculture. Dr. Bernard V. Travis, Professor of Medical Entomology and Parasitology at Cornell University, has been the principal investigator since the inception of the series. A thorough search was made of the entomological literature, and for each country and major geographical region of the world a "summary report" was prepared, listing the reported occurrences and habitat data for medically important arthropods. These summary reports were placed on file at the Natick Laboratories and the Military Entomology Information Service, Walter Reed Army Medical Center, where they are available for loan and reference.

By 1964 it became evident that changes in the field of entomology--both in knowledge acquired and in the distributions of some species--required updating of the material contained in the country summary reports. It was decided also that the material would be more useful if consolidated on a continental rather than a country basis. Contracts were let with Cornell University for accomplishing these two tasks simultaneously, and the present report for Europe (exclusive of the European U.S.S.R.) is the result of this work. This report is the last in the series of six continental reports.

Distributions of the most important species have been mapped by the University of Pittsburgh's Department of Geography. It is planned to publish these maps, together with those for other continents, as an Atlas of Medically Important Arthropods.

The contract under which this work was accomplished was supported by funds from the Office of the Chief of Research and Development, Department of the Army. This contract was monitored by Dr. William C. Robison, Chief of the Geography Division, Earth Sciences Laboratory. Dr. John J. Pratt, Jr., Head, Applied Entomology Group, Pioneering Research Laboratory, was alternate project officer.

The following members of the staff at Cornell University assisted the authors in preparing this compilation: Eveline Aron, Editha Gagni, and Erika Zeballos. Priscilla Lawrence typed the manuscript.

The Earth Sciences Laboratory is pleased to be able to present the results of the labors of Dr. Travis and his co-workers for the use of Army specialists in preventive medicine, public health officers, and entomologists.

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ABSTRACT

The occurrence of insects and other arthropods of medical importance in Europe (exclusive of the European portions of the U.S.S.R. and Turkey) is summarized on the basis of a review of almost all available references in the scientific literature. The report includes, for each major group of arthropods, a listing of species and subspecies with biological and distributional data, tabulations of diseases or disease organisms transmitted, and literature citations.

The groups of arthropods included, with the number of species or subspecies in parentheses, are: Mosquitoes (363), Black flies (206), Sand flies (42), Midges (115), Horse flies (379), Biting flies (5), Non-biting flies (38), Fleas (330), Bugs (9), Urticating and vesicating arthropods (4), Ticks (159), Mites (34), and Miscellaneous arthropods (20).

ARTHROPODS OF MEDICAL IMPORTANCE IN EUROPE (EXCLUSIVE OF THE EUROPEAN U.S.S.R.)

INTRODUCTION

1. Format of this report

As will be seen from the Abstract and the Table of Contents, the data in this report are presented according to arthropod groups.

For each arthropod group the data are presented in tables, one or two as required. In Table 1, which is the basic table for each arthropod group, are listed the arthropods, biological data, distribution, and documentary references. In Table 2 are summarized the disease organisms said by the author or authors to be transmitted by the arthropods.

After the above-mentioned tabular material there is, for each arthropod group, a section of Literature Cited, containing the complete citation referred to in the basic table (Table 1).

The format of the data sections of the report is explained below. At the end of this Introduction there are brief explanatory comments on synonymy, interpretation of statements, and the order of listings for any particular species in Table 1.

2. Table 1 explained

For each group of arthropods (mosquitoes, black flies, etc.) its basic table, Table 1, lists for each species and subspecies the distribution (country or countries), together with any biological data, and the reference documenting each entry. We will explain this table by considering entries under each column heading in turn.

a. SPECIES

Under the first heading, SPECIES, is entered: genus, species, subspecies (if any), and describer.

The format for a typical entry under SPECIES is somewhat variable, depending on the information available for each arthropod group. Typically, the genera and species are listed in alphabetical order in each group. No entries are made for subgenera. However, the subspecies, varieties and forms are listed as they appear in the publications. The describer's name is given unless the author has not listed the name and it is not clear from the literature what the describer's name should be.

See note on synonymy at the end of this Introduction (paragraph 5.a).

b. BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION

The basic data on Table 1 are presented under these headings. The entries in the table are made in the same order as the heading indicates, and are separated by the same punctuation mark, ";". "No data" is indicated by "---"; that is, there may be no data on BREEDING HABITATS or ADULT ACTIVITY. Under DISTRIBUTION, the third category of information, a number is entered; this number represents a country or region in Europe, which may be identified by consulting the Geographical Index, immediately following this Introduction.

For example, the first item on page 2 (---;---; 109) means that there are no data on BREEDING HABITATS or ADULT ACTIVITY for France (number 109 under DISTRIBUTION, as identified in the Geographical Index for *Aedes abf'tchii*, although the indicated reference (Martini 1920) shows that the species occurs there.

Further comments on each part of this heading follow:

BREEDING HABITS: No entry is made (as indicated by "----") unless the author makes clear and specific statements. The data concerning the biology of the immature forms are quite sparse, except for mosquitoes.

ADULT ACTIVITY: Again, no entry is made (as indicated by "----") unless the author makes clear and specific statements. Except for mosquitoes, the authors present little biological data for adult arthropods.

DISTRIBUTION: As indicated by the heading, the third category of information is DISTRIBUTION and the entry in the table consists of one or more numbers. These numbers represent countries or regions in Europe and may be identified by referring to the Geographical Index. All entries in this report use these numbers (in the DISTRIBUTION column of both Table 1 and Table 2) instead of the full country or region name. For example, 88 is the number for Czechoslovakia. Where the authors have not recorded a specific country, an inclusive number is used. For example, 336 is the number for Europe.

c. Symbols attached to the country number or to a reference date

In the DISTRIBUTION column, the country number may have a symbol attached to it, e.g., 109* or 109°. In the DATE column, the date may have a symbol attached to it, e.g., 1920+.

Symbol * after a country number indicates that the species is said by the author to transmit a disease organism to man. For example, on page 2 of this report, the 5th entry ends with ". . . 109*". This means that the species in France (country 109 in the Index) is said to transmit a disease organism to man. When this symbol is used, the species of arthropod and the disease transmitted are entered in the table immediately following; that is, such entries in Table 1 are summarized in Table 2. Where two asterisks (**) appear, they refer to two separate diseases.

Symbol ° after the country number indicates that the species is said by the author either to bite or directly annoy man. For example, on page 4 of this report the 4th listing ends ". . . 109°". This means that this particular species in France (country 109 in the Index) is said by the author either to bite or annoy man. These entries are not summarized, as are those marked "*" above.

Symbol + after a reference date indicates that the record is an unconfirmed entry. For example, in Table 1 - Fleas, the entries under Ioff 1928 (page 258) and Gil Collado 1948 (page 260) need further confirmation.

d. (GENERAL STATEMENTS)

In addition to the three main categories of information as described above, the column heading indicates that there may be general statements. If so, this entry is made after those of the three main categories and is enclosed in parentheses, exactly as the column heading indicates. This may be a statement for either the various countries or continents or for the various species. For example, on page 2 of this report, the 5th listing ends ". . . (Usually in artificial containers)". Also, on page 18, the 4th listing ends ". . . (Tree holes)".

e. AUTHOR and DATE

Every entry in Table 1 is documented by an author (or a senior author) and date of publication. The AUTHOR and DATE (year of cited publication) are entered in the last two columns of Table 1. Explanation of symbol "+" which may be attached to the DATE is given in paragraph c above. (The complete literature citation is given, for each arthropod group, in the section immediately following the tables.)

3. Table 2 explained

As noted above, all listings marked "*" in a table are summarized for the particular species of arthropod in the table immediately following, giving the country or countries where occurring, and the disease or disease organism transmitted.

Table 2 summarizes such items from Table 1. For example, on page 2 of this report (Mosquitoes, Table 1), the 6th listing under *Aedes aegypti* ends "... 109*". We note also, in the first listing on page 3, under the same species: "... 333*". These listings are summarized at the beginning of Table 2, page 108. Besides the SPECIES and DISTRIBUTION, the table also gives information on DISEASE or DISEASE ORGANISM. Entries in these columns are discussed below.

a. SPECIES and DISTRIBUTION

The SPECIES is, of course, that indicated in Table 1, and the DISTRIBUTION column summarizes all the numbers (i.e., countries or regions) that are marked "*" listed under DISTRIBUTION in Table 1 for this particular species.

b. DISEASE OR DISEASE ORGANISM

Under this heading there are four subheadings (VIRUS & RICKETTSIA; PROTOZOA; HELMINTHS; OTHER). The subheading itself may be broken down where necessary. For example, on page 108 (Mosquitoes, Table 2), the first subcolumn (VIRUS & RICKETTSIA) is broken down as: Dengue and Yellow fever, with numbers indicating the appropriate distribution.

4. Literature Cited section explained

At the end of each arthropod section there is a complete list of Literature Cited, as referred to in the last column of Table 1 (AUTHOR and DATE).

5. Special comments

a. A note on synonymy

The problem of attempting to straighten out synonymy of scientific names is beyond the scope of this report. Except for a few species, the scientific names, as used by the authors, are entered in the tables. In a few cases we have followed the synonymy of an acceptable monograph. As there is no universal agreement among taxonomists, the responsibility of synonymy must be referred to the interpretation of each specialist.

b. A note on interpretation of statements

An attempt has been made to avoid interpreting the published statements. This has been found difficult in matters concerning disease transmission; thus it is often clearer if we use the author's own words. It has been found that few authors make unqualified statements concerning the vectors. Also, as one might expect, most of the statements are based on epidemiological evidence and not on actual transmission.

c. Order of listings for same species in Table 1

If there is more than one country number for a single entry, the country numbers are arranged in ascending order. For example, on page 6, the first listing reads: "... 34, 92, 108, 109, 119, 140, 155, 255."

When there is more than one entry (that is, citation with Author and Date) under a single species and describer, the entries are listed in ascending order of country number, based on the first (lowest) number for each country. For example, on page 2, the first entry under *Aedes aegypti* is 6, the next 45, then 84, and then 98. Since all countries mentioned by a single author are listed in that entry, the countries under a given species are not necessarily all in numerical order where there is more than one entry for that species.

GEOGRAPHICAL INDEX OF EUROPE¹

In 1962 a world-wide Geographical Index was published² listing countries, islands, and major regions in alphabetical order, and assigning a number to each. The following list consolidates the countries of Europe included in this report. The list also includes some place names that are found in the entomological literature but which are not independent countries, such as Faeroe Islands (103), Macedonia (357), and Prussia (358). The presence of certain place names in the older literature also necessitates their listing in forms that do not coincide with current political realities, such as Ireland (152) for the entire island rather than the country of that name, and Germany (119) and Poland (244) as they were bounded prior to 1938. Thus the countries to which the code numbers refer are not necessarily coextensive with those shown on the map following the Index, which shows boundaries and country names at the time of publication of the present report.

All the numbers of the European countries are listed in order. For example, 6 stands for Albania and 333 for Yugoslavia. To accommodate citations that are not by specific countries, inclusive titles are used, e.g., 336 stands for Europe. This is the purpose of the Index: to identify the countries or other locations represented by numbers under DISTRIBUTION (Table 1 or Table 2).

The index also includes a few synonyms. The synonymy is preceded by a dash, as for example, " - Netherlands, 136" which is indexed under "136 Holland."

¹Those portions of the Soviet Union and Turkey that lie within Europe are omitted from this report, as these countries are both included as wholes in Technical Report 67-65-ES, Arthropods of Medical Importance in Asia and the European U.S.S.R., 1967.

²B. V. Travis, H. H. Casewell, Jr., W. B. Rowan, H. Starcke, and C. W. Ross: Classification and coding system for compilations from the world literature on insects and other arthropods that affect the health and comfort of man, U.S. Army Quartermaster Research & Engineering Center, Natick, Mass., Technical Report ES-4, 259 pp., 1962.

GEOGRAPHICAL INDEX OF EUROPE

- 6. Albania
 - Alpine Region, 356 (Inclusive title)
- 12. Andorra
- 26. Arctic Circle, within the, (Inclusive title)
- 34. Austria
- 38. Balearic Islands
 - Balkans, 341 (Inclusive title)
- 41. Bear Island (Also included in Svalbard, 296)
- 45. Belgium
- 58. Bulgaria
 - British Isles, 124 (Inclusive title)
- 73. Channel Islands
- 84. Corsica
- 87. Cyprus
- 88. Czechoslovakia
- 92. Denmark
- 98. England
 - Europe, 336 (Inclusive title)
- 103. Faeroe Islands
- 108. Finland
- 109. France
- 119. Germany (See page xii)
- 120. Gibralter (Colony)
- 124. British Isles (Inclusive title, includes Great Britain and Ireland)
 - Great Britain (Includes England, 98; Scotland, 272; and Wales, 331), included in British Isles, 124
- 125. Greece
- 136. Holland or Netherlands
- 140. Hungary
- 141. Iceland
- 152. Ireland (Includes Northern Ireland and Irish Republic)

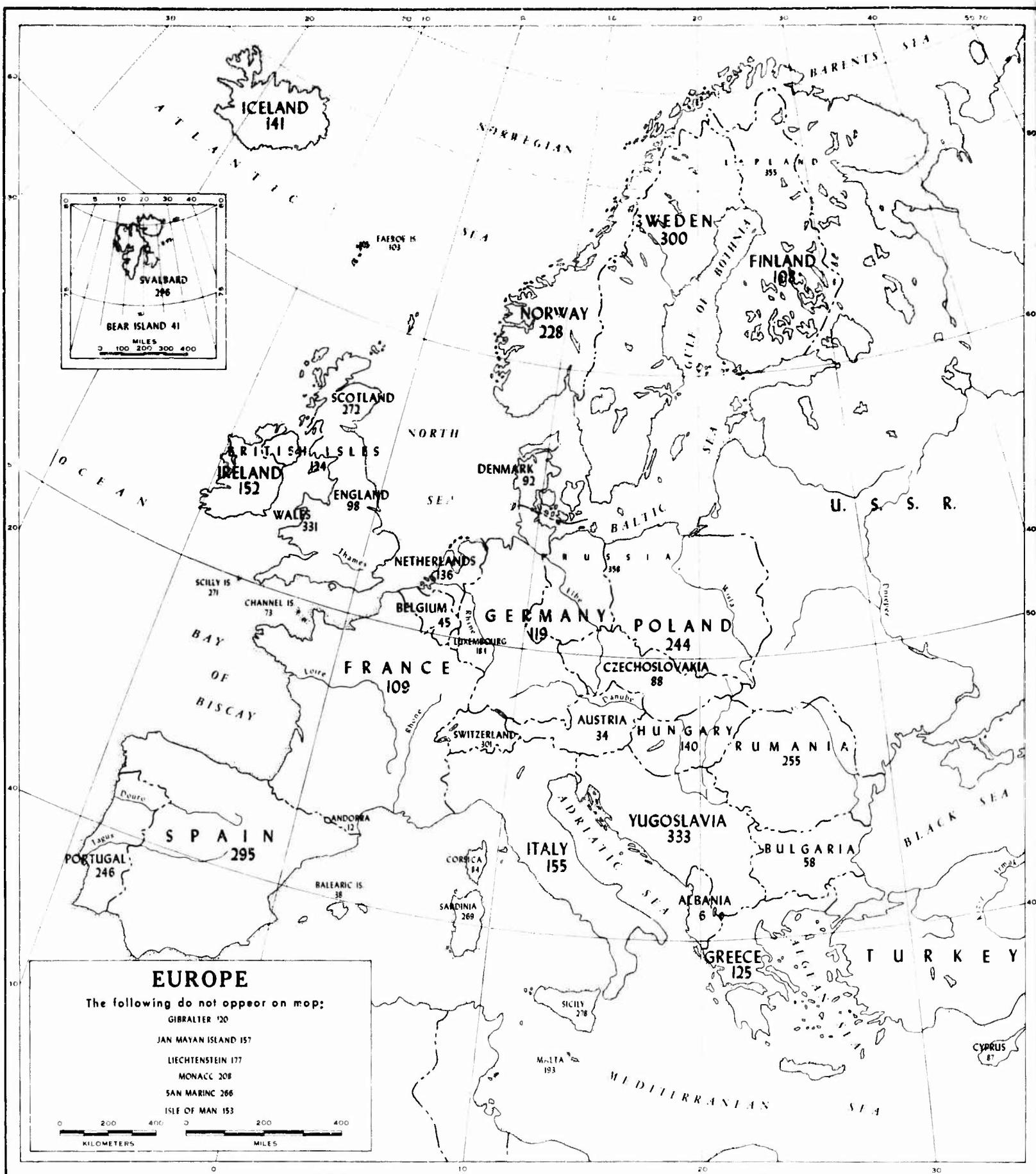
GEOGRAPHICAL INDEX OF EUROPE (CONTINUED)

- 153. Isle of Man
- 155. Italy
- 157. Jan Mayen Land
 - Lapland, 355 (Inclusive title)
- 177. Liechtenstein
- 184. Luxembourg
 - Macedonia, 357 (Inclusive title)
- 193. Malta and Surrounding Islands
 - Mediterranean Region, 343 (Inclusive title)
- 208. Monaco
 - Netherlands, 136 (Indexed as Holland)
- 228. Norway
- 244. Poland (See page xii)
- 246. Portugal
 - Prussia, 358 (formerly); now divided among Germany, Poland, and the U.S.S.R.
 - Pyrenees, 348 (Inclusive title)
- 255. Rumania
- 266. San Marino
- 269. Sardinia
- 271. Scilly Isles
- 272. Scotland
- 278. Sicily
- 295. Spain
- 296. Spitzbergen and Adjacent Islands or Svalbard
 - Svalbarⁱ, 296 (Indexed as Spitsbergen and Adjacent Islands)
- 300. Sweden
- 301. Switzerland
 - United Kingdom of Great Britain and Northern Ireland, included in British Isles, 124
- 331. Wales
- 333. Yugoslavia

GEOGRAPHICAL INDEX OF EUROPE (CONTINUED)

ADDENDA:

- 336. Europe (Inclusive title)
- 341. Balkans (Inclusive title)
- 343. Mediterranean Region (Inclusive title)
- 348. Pyrenees (Inclusive title)
- 355. Lapland (Inclusive title)
- 356. Alpine Region (Inclusive title)
- 357. Macedonia (Inclusive title)
- 358. Prussia (formerly); now divided among Germany, Poland, and the U.S.S.R.



ARTHROPOD DATA

A. MOSQUITOES

The mosquito entries include information on the biology of the larvae and adults in addition to distribution and disease transmission. There are fewer species (363) of mosquitoes in Europe (exclusive of the European U.S.S.R.) compared to the other continents. However, the tabulations show almost all species have a large documentation of their biology.

So many mosquitoes will bite man that an effort has been made to make a complete listing of mosquito species and subspecies. The synonymy is a difficult problem in this group; thus, some species and subspecies in the list are not valid names.

TABLE 1 - MOSQUITOES

SPECIES	BREEDING HABITATS; ADULT ACTIVITY, DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES</i> <i>abfitchii</i> Felt	---; ---; 109 Clear waters; bushes and evergreen thickets; 119°; 244°	Martini	1920
<i>aegypti</i> (Linnaeus)	---; ---; 6 ---; ---; 45 ---; ---; 84, 269 (Usually in artificial containers) ---; possible vector of dengue and yellow fever; 84 ---; ---; 98, 193, 357 Small urban water collections; ---; 109*	Anonymous van den Berghe Aitken Anonymous Kumm Rioux Legendre Kirchberg & Petri Harvey & Hill Pandazis Bos Anonymous Foote Margarlef Gil Collado Amelivia Gil Collado Mattingly Tischler	1920 b 1944 e 1947 1954 1944 p 1931 1958 1935 1950 1947 1935 1934 1945 b 1954 1947 1937 1930 1930 1957 1950

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES aegypti</i> (Linnaeus) (cont.)	---; ---; 333*	Anonymous	1944n
	Artificial containers; ---; 343	Monchadskii	1936
<i>aegypti</i> var. <i>queenslandensis</i> Theobald	---; common; 343	Mattingly	1957
<i>albopictus</i> Skuse	---; experimental transmission of dengue; 136	Dinger & Snijders	1931
<i>alpinus</i> Linnaeus	---; ---; 108	Anonymous	1944m
	In marshes; Apr.; 109	Seguy	1920
	---; ---; 228, 355	Edwards	1921
	---; ---; 300	Anonymous	1944h
<i>annulipes</i> (Meigen)	Low lying fens, riverside swamps; rarely bite man; 34°	Anonymous	1944k
	Shaded reservoirs; ---; 34, 98, 140, 300	Monchadskii	1936
	Open swamps; ---; 34, 45, 119, 136, 140, 244, 300	Edwards	1921
	Shaded reservoirs, bright woods; ---; 45, 136. Shaded reservoirs in woods; ---; 119	Shtakelberg	1937
	---; ---; 88°	Anonymous	1944o
	---; ---; 92. Open swamps or partially shaded, temporary pools; April-Sept.; 124	Natvig	1948
	Open or partly shaded situations among reeds or sedges, always in fresh water; abundant and troublesome; 98	Edwards et al.	1939
	Open swamps, temporary water; rural, Feb.-Sept.; 98	Marshall	1938
	Fen country; ---; 98	Anonymous	1949
	---; numerous, bites during day; 98°	Anonymous	1959
	Marshes with vegetation; readily enters houses; 109	Lavier & Dao Van Ty	1944
	Field ditches near moor; May; 109	Vogel	1933
	In clear, sunlit ditch with large clumps of Carex on edges and sparse plant debris on surface; ---; 109	Doby & Raadt	1960

TABLE I - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES annulipes</i> (Meigen) (cont.)	Rock holes with decaying vegetation; ---; 109	Callot	1939
	Areas subject to flooding; ---; 109	Peus	1934
	---; marshes; 109, 136, 140, 155. Pools and ditches; ---; 119	Martini	1920b
	---; bites in early morning; 109*	Callot & Dao Van Ty	1945
	Alder forests in marshy districts; ---; 119*	Peus	1932
<i>argenteus</i> Poiret	---; ---; 23. Drains, sewages; Aug.-Nov.; 295	Gil Colladon	1930
	---; enters houses; 84	Galliard	1927
	---; in houses; 109	Seguy	1929
	---; ---; 119	Zschucke	1927
	---; ---; 120	Smales	1926
	---; Apr.-Nov.; 125	Cardamatis	1929
	---; ---; 125*	Blanc & Caminopetros	1930
	---; experimental transmission of dengue; 136	Dinger & Snijders	1931
	---; Oct.; 155	Hargreaves	1923
	Very diverse waters, often domestic; May; 246*	Braga	1931
	---; ---; 246, 343	Edwards	1921
	---; ---; 269, 278	La Face & Raffaele	1928
<i>behningi</i> Martini	---; ---; 255	Zotta	1932
<i>berlandi</i> Seguy	---; ---; 84, 155, 246, 269, 295	Stone et al.	1959
	Deep water, rich in alkaline matter, tree holes; bites during the evening and at night; 109*	Rioux	1958
	---; in houses; 109	Seguy	1921
	---; July-Aug.; 109	Seguy	1924
<i>cantans</i> (Meigen)	Woodlands, ditches; common; 34°	Anonymous	1944k

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES cantans</i> (Meigen) (cont.)	---; ---; 34, 45, 109, 244, 300, 301, 355 Ditches and pools in woods; ---, 45° ---; ---; 84 ---; ---; 88° Ponds, peat ditches; active about sunset and sunrise in the morning, commonest in May-June; 92° ---; forests, common, April, July-Aug.; 92. ---; ---; 108°, 109°, 300°. Snowmelt and rain-water in humus and deeper waters, temporary waters densely shaded; margins of forests, Aug.; 119. Partly dried up pool with bottom covered with decaying leaves, pool in woodland of birches and alder, partly shaded pools; forests and woodlands; 228° Woodland pools, temporary shaded fresh water pools; rural, all year; 98 Shady temporary pools in or near woods; ---; 98° Swamps; ---; 98 Marshes with vegetation; readily enters houses; 109 In clear, sunlit ditch with large clumps of <i>Carex</i> on sides and sparse plant debris on surface; ---; 109 Hardwood forests, pond with decaying leaves; April, May; 119 Puddles in forest; March; 119°, 24° Shady temporary pools in or near woods; numerous and troublesome during summer, woods; 124° ---; ---; 136, 193, 278 ---; ---; 140, 341, 356. (Very blood-thirsty) Woodlands; ---; 155° ---; possible vector of tularemia, common, June-Aug., peak July; 228 ---; ---; 255 Shaded temporary pools; Apr.-Sept.; 272	Martini Goetghebuer Aitken Anonymous Nielsen & Greve Natvig Marshall Anonymous Macan Lavier & Dao Van Ty Doby & Rault Vogel Martini Anonymous Seguy Martini Anonymous Anonymous Anonymous Anonymous Edwards et al.	1928 1925 1954 1944 o 1950 1948 1938 1949 1939 1944 1960 1929 a 1920 b 1959 1924 1930 1945 b 1944 b 1944 f 1939
<i>cantans</i> var. <i>subvexans</i> Martini	---; ---; 92	Stone et al.	1959

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
AEDES <i>capricornis</i> (Pallas)	---; ---; 34, 92, 108, 109, 119, 140, 155, 255 (Salt marsh or brackish water, also fresh water, in larger rivers in open meadows, enters houses, common in June and Sept.)	Edwards	1921
	---; abundant on east coast in July and Aug.; 84. Coastal brackish water marshes, ditches, pastures, ricefields; mountain communities, at times very troublesome in open and in houses; 26°	Aitken	1954
	Pools containing thick layers of green algae; near habitations, in cellars, June-Sept., Nov. and Dec.; 92	Natvig	1948
	Brackish pools or marshes near coast, large rivers; vicious biter, mostly outdoors in the afternoon, enter houses; 98°, 331°	Anonymous	1949
	Salt marshes and inland fresh waters; April-Dec.; 98, 272°, 331	Marshall	1938
	Brackish water, fresh water pools, sewage beds; peak Aug.-Sept.; 98, 331	Edwards et al.	1939
	Temporary reservoirs with alkaline water, irrigation canals; bites by day in grass; 108°, 155°	Shtakelberg	1937
	Artificial containers; abundant in coastal and rural areas; 109	Roubaud & Treillard	1944
	Drain pools; bites in the afternoon; 109	Callot & Dao Van Ty	1942
	Open shaded reservoirs; ---; 109, 155	Monchadskii	1936
	Brackish water; ---; 109	Roubaud & Treillard	1943
	Salt marsh; ---; 109	Rioux	1958
	---; enters houses; 109°	Callot & Vermil	1948
	Flooded meadowlands, brackish water areas, flood- lands of rivers and streams; June-Aug.; 119°	Herold	1933
	River overflows, flooded meadows; ---; 119	Herold	1936

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES caspius</i> (Pallas) (cont.)	Salt marshes; coast; 124	Harvey & Hill	1947
	Fresh and brackish water with slow currents; crepuscular; 125°	Pandazis	1935
	---; rare; 125	Stephanides	1938
	---; ---; 244	Martini	1928
	Ditches, rice ponds, puddles; abundant in Aug., bites at any time of the day but more intensely at dawn, in houses; 246°	Cambournac	1944
	Brackish or salt water, also in fresh water, meadows along edges of rivers; bites in evening, June, Aug.-Oct.; 246	Braga	1931
	---; bites in open in daylight, Apr.-June; 255	Zotta	1932
	Permanent, slightly saline water with much vegetation in excavations, along irrigation dikes; ---; 269	Gil Collado	1937
	Brackish water pools without vegetation; bites especially on cloudy days; 295°	Gil Collado	1930
	---; ---; 300	Edwards	1921 a
	---; ---; 333	Anonymous	1944 n
	---; ---; 343 (In borrow pits and other pools with vegetation, in drains either stagnant or slow moving, reedy fast-flowing canals and drains, enters houses, bites after sunset and in broad daylight, all year, peak autumn and winter)	Kirkpatrick	1925
<i>caspicus dorsalis</i> Meigen	Alkaline water; in fields; 34°, 108°, 140°	Shtakelberg	1937
	Small reservoirs; ---; 34, 108, 140. Small reservoirs with alkaline water; ---; 300°	Monchadskii	1936
<i>caspicus</i> var. <i>hargreavesi</i> Edwards	---; ---; 109, 155	Stone et al.	1959
<i>catafila</i> Canamares	---; ---; 295	Clavero	1950
<i>cataphylla</i> Dyar	Fields, streams; ---; 34, 140. Fields, ditches; ---; 108, 228	Monchadskii	1936

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY, DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES cataphylla</i> Dyar (cont.)	Temporary ponds on plains, ponds lying on the outskirts of forests; ---; 92. Pools, water-filled ditches; July; 228. ---; ---; 244. ---; May; 300	Natvig	1948
	Ditches; ---; 119	Vogel	1933
<i>cataphylla</i> <i>cataphylla</i> Dyar	---; ---; 336	Stone	1965
<i>cataphylla</i> var. <i>rostochiensis</i> Martini	---; ---; 108, 228, 300	Edwards	1921
	In ditches or waterholes on edge of forests; ---; 119, 244, 258	Martini	1930
	---; April; 119	Vogel	1933
	---; ---; 244°	Anonymous	1945 a
	---; ---; 295	Torres Canamares	1945
<i>cinerinus</i> Meigen	Riverside marshes, flooded fields; ---; 34	Anonymous	1944 k
	---; May-July; 45°	Goetghebuer	1925
	---; ---; 45	Anonymous	1944 c
	---; ---; 84	Anonymous	1944 p
	Fresh water ponds; near dried ponds, meadows, in deep grass, bite all day, April-July and Sept.; 92°	Wesenberg-Lund	1921
	Marshes; ---; 92	Wesenberg-Lund	1919
	---; in meadows; 92. ---; on moors; 119	Martini	1930
	---; common; 92	Anonymous	1944 g
	Riverside marshes and flooded meadows, in woodland pools; most troublesome where it is abundant; 98, 272, 331. ---; naturally infected with tularemia; 300	Edwards et al.	1939
	Shallow temporary fresh water pools; bites during day and at dusk; 98	Anonymous	1949
	Cultivated and natural fenland; common; 98	Macan	1939

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES cinereus</i> Meigen (cont.)	---; rural, April-Sept.; 98, 272, 331	Marshall	1938
	---; ---; 98°, 272°, 331°	Moore Hogarth	1928
	Flooded meadows and large marshes; ---; 108, 155	Edwards	1921
	Reservoirs, swamps; ---; 108, 155	Monchadskii	1936
	---; June; 108. Ditches at border of lakes, open-lying pools and ponds, pools near highway, flooded meadow; July-Aug.; 228°. ---; June-Sept.; 300	Natvig	1948
	---; ---; 108°	Shtakelberg	1937
	In clear, sunlit ditch with large clumps of <i>Carex</i> on edge and sparse plant debris on surface; ---; 109	Doby & Rault	1960
	Forest ditches, flooded meadows, temporary pools shaded or sunny; ---; 109°	Callot & Dao Van Ty	1945
	On river edge; ---; 109	Broiemann	1919
	Forest ponds; ---; 109	Eckstein	1919b
	---; March-Oct.; 109	Eckstein	1919a
	Ponds, ditches, water holes in forest; April and May; 119	Vogel	1933
	Woods, clean pools and brooks; July, Aug.; 119°	Eckstein	1920a
	---; swamps; 119	Martini	1923
	---; common, bite causes skin infection; 136°	Anonymous	1944d
	---; ---; 140, 244	Martini	1928
	Riverside marshes and swampy meadows but also in open forest; ---; 155	Anonymous	1945b
	---; ---; 228	Lang	1920
	---; ---; 244°	Anonymous	1945a
	Artificial pool with organic matter; ---; 295	Clavero	1945
	---; infected with <i>Bacterium tularensis</i> ; 300	Olin	1942
	---; June-Aug.; 301°	Bangerter	1926

TABLE I - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>Anopheles</i> <i>comptosiae</i> (De Geer)	Pools, ditches, reservoirs with leaves; ---; 34. Pools, ditches; ---; 300	Shtakelberg	1937
	---; ---; 45, 119, 301 Dried pool bottoms; forest, bite in shade or during evening, Jan., July-Dec.; 92°. Pools at seashore, pools covered with decaying leaves and pine needles, pools with muddy or stony bottom; woodland and mountainous regions, in houses, persistent biter, bite at night or shady places, May-July; 228°. ---; May-July; 300	Natvig	1948
	---; ---; 84	Edwards	1928
	---; ---; 88°	Anonymous	1944
	---; active about sunset and sunrise, common in April-May; 92	Nielsen & Greve	1950
	Open heaths or in woodland pools; Sept.; 98	Edwards et al.	1939
	---; rural; 98 (Temporary waters in forests)	Marshall	1938
	Reservoirs; ---; 108, 109, 300	Monchadskii	1936
	Mashes with vegetation; readily enters houses; 109	Lavier & Dao Van Ty	1944
	Rock holes with decaying vegetation; ---; 109	Callot	1939
	Temporary waters; ---; 109	Rioux	1958
	---; ---; 109°	Callot & Vermeil	1948
	Mixed deciduous forests; ---; 119°	Peus	1932
<i>cretinus</i> Edwards	---; ---; 119	Mattingly	1954
	Tree holes; ---; 125	Monchadskii	1936
	---; June; 125	Seguy	1924
<i>curvipes</i> Coquillet	---; ---; 109	Seguy	1920
<i>cyprius</i> Ludlow	---; woods; 108°, 119°	Shtakelberg	1937
	---; June; 108. ---; ---; 119, 300	Natvig	1948
	---; ---; 244	Stone	1963

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES</i> <i>delta</i> Seguy	---; ---; 357	Seguy	1924
<i>desbansi</i> Seguy	Salt marshes and fresh water; ---; 109 ---; May, Sept.; 109	Mathis Seguy	1934 1924
<i>detritus</i> (Haliday)	Brackish water, pools at the base of sand dunes; ---; 45	Goetghebuer	1925
	Salt marshes, river plains; ---; 84. Around coast, brackish-water marshes; ---; 269°	Aitken	1954
	Stagnant reservoirs with vegetation; ---; 92	Monchadskii	1936
	Salt or brackish water; ---; 92, 152, 357	Edwards	1921
	---; common on coasts; 92, 357. Salt marshes, coastal areas; all year; 98, 272, 331°. Inland and salt districts; ---; 109, 119	Marshall	1938
	---; ---; 92, 98, 109, 152, 155, 269, 295, 357 (Salt pools, with or without plants, stagnant salt drains, bites readily by day and in the evening, June-July)	Kirkpatrick	1925
	Stagnant pools of brackish or salt water left by high tides, marshy area near river mouths; persistent biter, chiefly at dusk; 98°, 272°	Anonymous	1949
	---; ---; 108	Edwards	1921 a
	Artificial containers, drainage ditches with brackish water, pools, with or without vegetation, saline water ditches; ---; 109	Rioux	1958
	Fresh water; ---; 109°	Roubaud & Treillard	1943
	Abundant in low-lying coasts amidst vegetation of coastal marshes; all year, most common in summer, vicious and persistent biters; 124°	Edwards et al.	1939
	Brackish water; active during day and night; 125	Pandazis	1935
	Pools, ditches, swamps, fresh water; ---; 125	Stephanides	1937
	---; ---; 140. Pool with seaweed near sea shore; April; 228	Natvig	1948

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES</i> <i>detritus</i> (Haliday) (cont.)	Stagnant pools of salt or brackish water especially in marshy areas near the r'vers; bites at dusk outdoors; 152° Pools and trenches; abundant; 152 Ditches with vegetation; very aggressive, bites in the open especially at dawn, in houses, Aug.; 246° Salt marshes at the mouths of rivers; active mostly at dusk; 246 Saline pools, salt marshes; ---; 295 Marshes; ---; 295 Amongst vegetation in open water, in pools, usually in brackish or salty water, also in slow-running fresh water; vicious biters; 331° ---; ---; 333	Moore Hogarth Wilson Cambournac Braga Gil Collado Gil Collado Wright Anonymous	1928 1937 1944 1931 1937 1930 1923 1944 n
<i>diantaeus</i> Howard, Dyar & Knab	Bog, pond; rare, forest, May-June, Sept.; 92. ---; June; 108. Woodland shaded waters, open-lying pond in field; July-Sept.; 228 Reservoirs; ---; 108, 119 ---; ---; 244 ---; ---; 358	Natvig Monchadskii Martini Martini	1948 1936 1928 1930
<i>diversus</i> Theobald	---; ---; 92, 98, 333. Bushes, grassy grounds, slow-flowing waters, in nurseries, ponds; April-July and Oct.-Nov.; 119 ---; ---; 244	Martini	1930 1929
<i>dorsalis</i> (Meigen)	---; ---; 34, 92, 98, 108, 109, 119, 140, 228, 300 (Salt or brackish water, also fresh water, open meadows, enters houses, June and Sept.) ---; ---; 58, 244 ---; ---; 88° Brackish pools or coastal marshes; enters houses, bite viciously in the afternoon outdoors; 92°, 300°. Hogarth Swampy hollows; ---; 98 Brackish pools or marshes near the coast, in large rivers; enters houses, outdoors in the afternoon, June-Aug., peak Sept.; 98	Edwards Martini Anonymous	1921 1928 1944 o 1928 1949

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES dorsalis</i> (Meigen) (cont.)	Brackish water; bite fiercely; 98°, 153° ---; May; 98 ---; July-Aug.; 108. Pools near sea shore, partly dried up pool filled with decaying leaves, open-lying pools exposed to sun, partly shaded pools; in botanical garden, April-June; 228 ---; ---; 109° ---; enters houses evening and early morning whenever the temperature is warmer inside than out; 119° Meadows; Sept.; 119 Brackish water; ---; 125 ---; ---; 244° ---; bites in open in full daylight, April-June; 255° ---; ---; 255 Rain puddles in streets, water holes in meadows; in houses, April; 333° ---; ---; 333 ---; ---; 356	Edwards et al. Marshall Natvig Rioux Martini Pandazis Anonymous Zotta Anonymous Martini Mühlens & Sfarcic Martini	1939 1938 1948 1958 1924 1923 1935 1945a 1932 1944 1921 1925 1930
<i>echinus</i> (Edwards)	Tree holes, reservoirs with vegetation; ---; 109 Tree holes; active by day; 125° ---; common; 125 Tree holes; bites at night, March, April-May, Nov.; 246° ---; Sept.-Oct.; 246 Tree holes, stables; ---; 295 Tree holes; ---; 357	Monchadskii Pandazis Stephanides Cambournac Braga Gil Collado Edwards	1936 1935 1937 1938 1931 1930 1921

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES excrucians</i> (Walker)	Ponds, forest edges, in the open; ---; 34, 119, 244. ---; ---; 98	Martini	1922
	In ponds, in the lowlands, forests with grassy floor; April, June; 92. In sphagnum and grasses in wet grounds, near forests; Sept.; 119°. ---; ---; 333, 358	Martini	1930
	---; March; 92. ---; ---; 108, 300, 355. Ponds, shoal water at the border of a lake, flooded grassy ditches, exposed to sun, partly shaded water, pools with mossy stones at bottom, ditches at border of swampy area; lowlands and mountainous regions, in houses and stables, annoying in shade and during evening, July; 228°	Natvig	1948
	Vegetated reservoirs, edge of woods; ---; 108°, 300°. ---; ---, 140°	Shtakelberg	1937
	Ditch with large clumps of <i>Carex</i> on edge and some vegetation on surface, clear water, sunlit; Apr.; 109. Brackish pools, ditches and between reeds in permanent ponds, forest on edges of large collections of water with vegetation; ---; 119	Doby & Raalt	1960
	Marshy areas in forests; ---; 119	Peus	1932
	Flooded areas; ---; 119	Peus	1934
	Reservoirs with vegetation; ---; 140	Monchadskii	1936
	---; ---; 244°	Anonymous	1945 a
	---; ---; 255	Zotta	1932
	Pools; ---; 295	Torres Canamares	1945
<i>fasciatus</i> Fabricius	---; June-Aug.; 6	Marcuzzi	1943
	---; ---; 87, 98*, 109*, 120, 125, 155*, 246*, 295*, 331*, 333, 336 (Vector of yellow fever)	Martini	1930
	---; ---; 119	Stuppy	1932
	On polluted water, artificial containers; in houses, bites by day; 125°	Stephanides	1937
	---; ---; 244°	Anonymous	1945 a

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES</i> <i>flavescens</i> (Müller)	---; ---; 34, 92°, 109, 140. Deep ditches with slightly brackish water; rural, April-Sept., 98°	Marshall	1938
	Open meadows bordering lakes and sea shores; occasionally in forests on warm days, meadows, Jan., April-Aug.; 92. ---; Sept.; 108. ---; July; 300	Natvig	1948
	Low-lying places amongst reeds and sedges, submerged during winter, Feb., May; 92	Edwards et al.	1939
	Marshy open meadow land, among reeds and sedge; ---; 98	Anonymous	1949
	---; bites on shady days and in early evening and night; 109°	Rioux	1958
	Flooded areas; ---; 119	Peus	1934
	Vegetated ponds and reservoirs, open places; bites after sunset and rain; 140°	Shtakelberg	1937
	Ponds; ---; 295	Torres Canamares	1945
<i>freyi</i> Edwards	---; ---; 92	Edwards	1921 a
	---; ---; 108, 119, 244	Martini	1928
	---; attacks and flies during bright sunlight hours; 119°	Martini	1924
<i>gallii</i> Martini	Puddle; ---; 119, 348, 356	Martini	1924
	---; ---; 140	Martini	1928
	Margins of open waters; Aug.; 301°	Galli-Valerio	1927
	Along river and lake; ---; 301	Galli-Valerio	1934
<i>geniculatus</i> (Olivier)	Timbered areas, tree holes; ---; 34°	Anonymous	1944 k
	Tree holes; ---, 45°	Goetghebuer	1925
	---; ---; 45	Anonymous	1944 c
	---; ---; 58. Tree holes; March-May, July-Aug.; 92. Tree hole covered with old leaves; May; 228	Natvig	1948
	Tree holes; ---; 84, 109, 295, 357	Edwards	1921

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES</i> <i>geniculatus</i> (Olivier) (cont.)	---; common in beech woods; 84	Edwards	1928
	---; ---; 88°	Anonymous	1944 <i>a</i>
	Tree holes; arboreal, all year; 98 (Able to carry malaria)	Marshall	1938
	Pools, ditches; ---; 98, 125. Tree holes, pools, ditches; ---; 300	Monchadskii	1936
	---; severe biter, annoying in timbered districts; 98°	Edwards et al.	1939
	Marshes with vegetation; readily enters houses, 109	Lavier & Dao Van Ty	1944
	Tree holes, particularly beech, rock pools with polluted water; ---; 109	Callot	1939
	In humid places; ---; 109	Seguy	1924
	---; experimentally infected with West Nile fever; 109	Vermeil et al.	1960
	Tree holes; April-June and Aug.; 119	Vogel	1933
	Willow and alder plantations on meadow land, mixed deciduous forests; ---; 119°	Peus	1932
	Tree holes with dark brown water and smaller holes with nearly clear rain water either at base of trunk or higher; bite freely outdoors, numerous May and June; 124°	Anonymous	1959
	Tree hole; ---; 125	Stephanides	1937
	Tree holes; experimentally infected with yellow fever; 140	Anonymous	1945
	Tree holes; ---; 155	Anonymous	1945 <i>b</i>
	Tree holes; May, Oct.; 246°	Braga	1931
	---; ---; 255	Zotta	1932
	---; ---; 269 (Tree holes)	Aitken	1954
	Tree holes; ---; 295	Torres Canamares	1945
	---; enters houses; 300°	Shtakelberg	1937
	---; ---; 301	Anonymous	1944 <i>i</i>
	---; ---; 333	Anonymous	1944 <i>n</i>

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES</i>			
<i>heracleensis</i> Callot	---; ---; 109	Aitken	1954
<i>hungaricus</i> Mihályi	---; ---; 140	Stone et al.	1959
<i>intrudens</i> Dyar	---; ---; 92	Edwards	1921a
	---; June; 108. Small, shallow pools and water-filled ditches at border of pine woodland, bottom of waters covered with decaying pine needles, polluted water; bites man in woodland on sunny day, in dwellings, May-Aug.; 228°. ---; June-July; 300	Natvig	1948
	In marshy areas in forests; ---; 119°	Peus	1932
	Reservoirs; ---; 119	Monchadskii	1936
	---; ---; 244, 358	Martini	1928
<i>jugorum</i> Villeneuve	In small pools of water; Aug.; 109	Seguy	1924
<i>lateralis</i> Meigen	---; ---; 34	Martini	1922
	---; ---; 109, 119, 333	Martini	1930
	---; ---; 255	Zotta	1932
<i>lepidonotus</i> Edwards	Reservoirs; varying salinity; 125°	Shtakelberg	1937
	---; ---; 333	Martini	1930
	---; ---; 357	Edwards	1921
<i>lesnei</i> Seguy	---; ---; 109	Seguy	1924
<i>leucomelas</i> (Meigen)	---; meadows; 34, 358	Martini	1922
	Brackish water; ---; 92, 119	Edwards et al.	1939
	Shaded reservoirs; ---, 92, 140	Monchadskii	1936
	Partly shaded open coastal or inland waters; rural, May; 98	Marshall	1938
	---; ---; 108, 300. Pools, ditches, small pools on grassy ground, small pool with seaweed near sea shore; April-May; 228	Natvig	1948

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES</i> <i>leucomelas</i> (Meigen) (cont.)	Forest edge where humus covers the wet ground, ditches; meadows behind dunes; 119, 244 ---; bites man in daytime, in forests, in the open during evening hours; 119° Pools; ---; 295	Martini Martini Torres Canamaras	1930 1924 1945
<i>longitubus</i> Cambournac	---; ---; 84, 109, 269 (Tree holes) Tree holes; in houses; 246 Tree holes; bites man at night, in houses, Feb., May; 246° Tree holes; ---; 295	Aitken Cambournac Cambournac Clavero	1954 1938 1944 1945
<i>lutescens</i> Fabricius	---; ---; 34, 92, 108, 140, 300 Ditches and marshy open meadowlands; troublesome biter, May-Aug.; 98° Brackish water ditches; ---; 98 ---; ---; 109 Field ditches near moor; May; 119 Open marshy meadowland, drainage ditches, stagnant water with dense vegetation; ---; 119° ---; ---; 255	Edwards Moore Hogarth Edwards Seguy Vogel Peus Zotta	1921 1928 1924 a 1924 1933 1932 1932
<i>maculatus</i> Meigen	---; ---; 34, 45, 92, 124, 155, 355 ---; ---; 84 Reservoirs with vegetation; ---; 98, 108, 140, 300 ---; bites man day and night; 108°, 140°, 300° Isolated marsh; May-June; 109 Ditches near fields; April, May and July; 119 Alder forests in marshy districts; ---; 119° Shady pools in or near woods; bites freely, May-Aug.; 272° Artificial pool with organic matter; ---; 295	Edwards Edwards Monchadskii Shtakelberg Seguy Vogel Peus Moore Hogarth	1921 1928 1936 1937 1920 1933 1932 1928
<i>mariae</i> (Sergent & Sergent)	Along the coasts; ---; 38, 278 Rock holes with decaying algae or salt water; ---; 84	Martini Callot	1930 1939

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES mariae</i> (Sergent & Sergent) (cont.)	Abundant in rock pools on coast, ---; 84 Rock pools, near the sea; ---; 109, 120. ---; ---; 155 Salt water; ---; 109, 343 ---; Aug.; 109 Brackish and saline water; bites in open after sundown; 125° ---; ---; 125 Fresh or salt water; ---; 246 ---; rare; 246 ---; ---; 255 Coast near river mouth; ---, 269 Reservoirs along seacoast; ---; 343	Edwards Rious Edwards Seguy Pandazis Anonymous Braga Cambournac Anonymous Aitken Monchadskii	1928 1958 1921 1924 1935 1944 1 1921 1944 1944 f 1954 1936
<i>mariae</i> <i>zammitii</i> Theobald	Marshes and swamps; ---; 295	Gil Collado	1937
<i>meigenianus</i> Dyar	Moor puddles; ---; 92. Moors in forest, puddles, open meadows, limestone ground on the freshest part of sphagnum; April, June and July; 119°. Forest; ---; 358 ---; ---; 98 ---; ---; 108, 119, 140, 244, 300 ---; ---; 109 ---; possible vector of tularemia, common, June- Aug., peak July; 228	Martini Martini Rybinsky Anonymous	1924 1922 1928 1933 1944 b
<i>metalepticus</i> Dyar	---; July, Aug.; 155	Dyar	1920
<i>nearcticus</i> Dyar	Pools of melting snow; ---; 108 ---; June; 108. Shallow pool with grassy bottom in swamp near brook; May; 228 ---; possible vector of tularemia, common, June- Aug.; 228	Monchadskii Natvig Anonymous	1936 1948 1944 b

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES</i> <i>nearcticus</i> Dyar (cont.)	---; ---; 300	Anonymous	1944h
	---; ---; 355	Martini	1930
<i>nemoroicus</i> Meigen	Ground pools and puddles in forests, ditches, edge of woods; ---; 34°	Anonymous	1944k
	---; ---; 98, 301. In moss, sphagnum, fallen leaves, forest ponds, puddles, beech forests, ditches; Jan. and March-June; 119°	Martini	1930
	---; ---; 108, 140, 244, 255, 300	Martini	1928
	Forest, humus; ---; 119	Martini	1923
	---; July; 119	Martini	1924
	---; possible vector of tularemia, common, June- Aug.; 228	Anonymous	1944b
	---; forest, creek valley at 1500 m. altitude, July; 333	Martini	1921
<i>nigrinus</i> (Eckstein)	---; ---; 92, 108. Partly shaded pond near highway with Sphagnum at the border, open- lying pool in grassy area near brook; June; 228	Natvig	1948
	---; meadows; 109. ---; ---; 244	Martini	1920b
	Reservoirs with vegetation; ---; 119	Monchadskii	1936
<i>nigripes</i> (Zetterstedt)	---; ---; 92. Tree holes; June; 119°	Martini	1924
	---; ---; 108. Small pool near lake, pond near railway; June, July; 300	Natvig	1948
	---; possible vector of tularemia, common, June- Aug.; 228	Anonymous	1944b
	---; ---; 296	Seguy	1924
	---; ---; 355	Martini	1930
<i>ormatus</i> Meigen	---; ---; 58, 140, 244, 300	Martini	1928
	---; April; 98. ---; March; 109. ---; June-Sept.; Martini 119°. Tree holes; April and Aug.; 244°. ---; all year; 301	Martini	1920b
	Tree holes; in forests, May; 119	Martini	1930

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES</i> <i>ornatus</i> Meigen (cont.)	---; on walls of cave; 119 Tree holes in forest at 1100 m. altitude; at 1500 m. altitude in forest, July and Aug.; 333°	Martini	1924 1921
<i>palmeni</i> Edwards	---; ---; 92, 108, 119	Edwards	1921 a
<i>paradiantaeus</i> Apfelbeck	Puddles and ditches; May; 333	Apfelbeck	1929
<i>parvulus</i> Edwards	---; ---; 92, 119 ---; ---; 108, 355	Edwards	1921 a 1930
<i>plumbeus</i> Stephens	---; ---; 295	Gil Collado	1937
<i>praeteritus</i> Seguy	---; very aggressive, crepuscular; 109	Seguy	1924
<i>pulchritarsis</i> Roncani	---; ---; 84 Tree holes, especially in elm trees; bites during the day outdoors; 109° ---; ---; 109, 333, 357 Rot holes of oak, elm and white poplar in which collected water has become thick and contains decaying wood debris; ---; 125 ---; near sea; 155 ---; rare; 155 ---; Sept.; 246 ---; ---; 255 Tree holes; ---; 295 ---; stables; 295	Rioux Martini Stephanides Seguy Hargreaves Braga Zotta Gil Collado Gil Collado	1928 1958 1938 1924 1923 1931 1932 1937 1930
<i>pulchritarsis</i> var. <i>berlandi</i> Seguy	Tree holes; ---; 109	Shtakelberg	1937
<i>pulchritarsis</i> var. <i>praeteritus</i> Seguy	---; ---; 109, 155	Shtakelberg	1937

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES</i> <i>pullatus</i> Coquillett	---; mountains; 88, 155, 341, 348. ---; at 2390 m. altitude; 301 ---; ---; 92, 108 Water holes in forest, ditches with brackish water; April, May and July; 119° Shaded reservoirs; ---; 155, 300, 348 ---; ---; 228 Pools, ditches, reservoirs with leaves; ---; 255	Vogel Edwards Vogel Monchadskii Natvig Shtakelberg	1929a 1921a 1933 1936 1948 1937
<i>pullatus</i> var. <i>jugorum</i> Villeneuve	---; ---; 155, 255, 301, 341, 348 ---; readily bites man; 301°	Edwards Galli-Valerio	1921 1926
<i>punctatus</i> Meigen	Stagnant, fresh or saline water; ---; 45° In marshes and ditches of stagnant water, domestic containers, rice fields, temporary breeding places created by tide; Apr.-Nov.; 109 In pools of stagnant, salt water; seashore or near stagnant, salt water; 109° ---; in forests, parks, gardens, rarely in houses; 109°	Goetghebuer Legendre Legendre Legendre	1925 1935 1936 1934
<i>punctor</i> (Kirby)	---; ---; 34, 45, 140. Temporary collections of water on open heath with more or less acidity, pools often lined with decaying leaves or sphagnum moss; bites indoors and outdoors, rural, all year; 98°, 272°, 331° Swampy areas; ---; 34° ---; ---; 45° ---; ---; 88° Shores; forest, in houses; 92. Pools and ponds near sea shore; May-July; 108. Small and deep holes in ground of burnt-out field in pinewood near bank of brook, partly shaded waters; April, June-Sept.; 228. Swamp pools; in house, May-Oct.; 300 (Pools, small ponds, lakelets, water-filled ditches, flooded grassy areas, lowlands, bites at night or in shade, in mountains, in houses, in cow stables and hog pens)	Marshall Shtakelberg Goetghebuer Anonymous Natvig	1938 1937 1925 1944o 1948

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES punctor</i> (Kirby) (cont.)	Clear temporary pools in or near woods; wet season, during the summer, bites readily towards dusk in early summer, abundant; 98°, 272°	Anonymous	1959
	Sandy and gravelly districts, with moorlands and heather, birch and coniferous woods, in dry hollows, in open heaths or in woodland pools; ---; 98, 272	Edwards et al.	1939
	---; ---; 108, 341. Sparse forests, ditches; bite by day, June; 119. Lowlands and moors; ---; 136	Martini	1931
	Woods; bites in woods; 109°	Callot & Dao Van Ty	1945
	Temporary pools in forests; ---; 109	Rioux	1958
	Swamps and reservoirs; ---; 109	Monchadskii	1936
	---; river edge in woods, May-Sept.; 109	Seguy	1920
	---; experimentally infected with West Nile fever; 109	Vermeil et al.	1960
	Alder forests in marshy districts; ---; 119°	Peus	1932
	---; rural areas; 124	Harvey & Hill	1947
	---; possible vector of tularemia, peak July; 228	Anonymous	1944 b
	---; ---; 244°	Anonymous	1945 a
	Artificial pool with organic matter; ---; 295	Clavero	1945
	Melted snow; ---; 300	Thienemann	1938
<i>punctor</i> var. <i>meigenanus</i> Dyar	---; ---; 34, 45, 108, 109, 124, 140, 300, 355	Edwards	1921
	Cool and damp places, wooded elevations, moorlands; Vogel April and May; 119	Vogel	1933
	Small pools in park and hardwood forest, ditches; ---; 119	Vogel	1929 a
	Marsh pools; ---; 331	Wright	1923
<i>quartus</i> Martini	---; ---; 34, 45, 98, 136, 140, 300, 333. Open waters; ---; 92. Near forests, in bushes, ditches, ponds with ledges; July-Aug.; 119°	Martini	1931

TABLE I - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>Aedes</i>			
<i>quintus</i>	---; ---; 109	Rybinsky	1933
Martini (cont.)	---; ---; 119, 244	Martini	1928
	---; ---; 255	Zotta	1932
<i>pustulosus</i> Torres Cañamares	---; ---; 295	Stone et al.	1959
<i>repletus</i> Medschid	---; ---; 34, 109, 140, 333 Meadows, ditches; May; 119	Stone et al.	1959
	Pools, reservoirs; ---; 119	Monchadskii	1936
	Pools; ---; 295	Torres Cañamares	1945
<i>riparius</i> Dyar & Knab	---; ---; 34, 244. ---; June; 228. Pond; June; Swamps and reservoirs; ---; 119, 300	Natvig	1948
	---; bites in bright sunlight; 119°, 300°	Monchadskii	1936
<i>rossicus</i> Dolbeskin, Gorickaja & Mitrofanova	---; ---; 88, 140	Stone et al.	1959
<i>rostochiensis</i> Martini	---; edges of woods; 34, 119, 358. ---; ---; 92, 300 ---; ---; 92°	Martini	1922
	---; ---; 108, 244	Martini	1928
	Hardwood forest pond; April; 119	Vogel	1929
	Ditches or water holes at the edge of woods; ---; 119	Martini	1920 a
<i>rusticus</i> (Rossi)	---; common; 45, 92, 109, 119. Ditches or wood- land pools border d with deciduous trees or hedges and bottomed with dead leaves; rural, all year; 98, 272, 331. ---; ---; 357 ---; ---; 45°	Marshall	1938
	Swamps; ---; 84. ---; ---; 269 (Woodland pools, ditches with deciduous vegetation)	Goetghebuer	1925
	Dried bottom of forest ponds; May; 92. ---; ---; 140	Aitken	1954
		Natvig	1948

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	YEAR
<i>Aedes rusticus</i> (Rossi) (cont.)	Ditches; ---; 92°, 155°. Ditches, pools and reservoirs; ---; 109°, 125	Shtakelberg	1937
	Pools and reservoirs; ---; 92, 119, 155	Monchadskii	1936
	Open pools on boulder clay, small and shallow pools, fenland; ---; 98	Macan	1939
	Stagnant water of neglected field or roadside ditches; ---; 98	Anonymous	1924
	---; readily bites in the woods, peak April-May; 98°, 272°, 331°	Edwards et al.	1939
	---; ---; 108	Edwards	1921a
	In clear, sunlit ditch with large clumps of <i>Carex</i> on sides and sparse plant debris on surface; ---; 109	Doby & Rault	1960
	Temporary waters, forests; ---; 109°	Calot & Dao Van Ty	1945
	Ponds in hardwood forest; March, April; 119	Vogel	1929 a
	Meadow ditches; May; 119	Vogel	1933
<i>Aedes salinellus</i> Edwards	---; rural areas; 124	Harvey & Hill	1947
	Open standing water with vegetation; ---; 125°	Pandazis	1935
	Prefers stagnant water slightly cold, with or without organic matter; Aug.-Sept.; 246	Braga	1931
	Small ponds with much organic detritus; ---; 295	Gil Collado	1937
	Brackish water; ---; 34, 92, 98, 119, 140	Edwards	1921
	Coastal marshes; ---; 98	Edwards	1924
	---; ---; 108	Edwards	1921 a
	Along coastal areas; ---; 92°, 109°, 152°, 244°, 269°, 357°. ---; bite by day; 98°, 155°. Small ponds, standing ditch water; along ocean coast, salt marsh species, great nuisance and bites by day; 119°	Martini	1931
	---; ---; 119, 244	Martini	1928
	---; possible vector of tularemia, common, June-Aug.; 228	Anonymous	1944 b
<i>Aedes salinus</i> Ficalbi	---; ---; 255	Zotta	1932

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES seguyi</i> Apfelbeck	Alder shaded pools in high forest, small puddles in swamp; 500-2000 m. altitude, April-May; 333	Apfelbeck	1929
<i>semicinctans</i> Martini	---; ---; 34	Edwards	1921
	Moors, moor waters, near the coast, in peat cuts, sphagnum; ---; 119. ---; ---; 300, 358	Martini	1931
	Ponds with sphagnum; ---; 119	Martini	1922
	---; ---; 244	Martini	1928
<i>simulium</i> Baranoff	Tree holes; May and June; 330	Baranoff	1927
<i>simeoni</i> Theobald	---; ---; 84	Kumm	1931
<i>starpari</i> Apfelbeck	Spring pools with much vegetation and shaded by alders; April-May; 333	Apfelbeck	1929
<i>sticticus</i> (Meigen)	Flooded meadows; rare; 34, 92, 98, 109, 119, 140, 272	Edwards	1921
	---; ---; 45°	Goetghebuer	1925
	---; ---; 88°	Anonymous	1944a
	Reservoirs with vegetation; ---; 92, 119, 140	Monchadskii	1936
	Partly shaded temporary pools; ---; 98, 272	Edwards et al.	1939
	---; rural, June, Sept.; 98, 272 (Open or partly shaded temporary waters)	Marshall	1938
	---; ---; 108, 300. in irrigation fields; a great nuisance; 109°. In irrigation fields, river lowlands; a great nuisance; 119°	Martini	1931
	Clear water; ---; 109	Callot & Dao Van Ty	1945
	---; in woods, on edge of river, Aug.; 109	Seguy	1920
	Partly shaded pond covered with <i>Lemna</i> near railway station; ---; 228	Natvig	1948
	---; ---; 244	Anonymous	1945a
<i>austriverus</i> Martini	---; ---; 295	Clavero	1950

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES</i>			
<i>sugens</i> Wiedemann	---; ---; 84	Martini	1920 b
<i>surcoufi</i> (Theobald)	---; ---; 109	Seguy	1924
<i>terriei</i> Theobald	---; along coast; 98, 244. ---; alder forests, along coast, June-July; 119°	Martini	1920 b
<i>variegatus</i> Schrank	---; ---; 92	Martini	1924
	---; ---; 108, 119, 140, 244, 300	Martini	1928
	Rivers edge, seldom in forests but very much in grazing grounds; ---; 119°. ---; a nuisance, Aug. and Sept.; 244°	Martini	1931
	---; ---; 124 (Day biter, responsible for the spread of elephantiasis)	Harvey & Hill	1947
	---; ---; 255	Anonymous	1944 f
<i>vexans</i> (Meigen)	Flooded meadows, and temporary collection of water in the open; bites during day; 34°	Anonymous	1944 k
	---; ---; 45°	Goetgheluwer	1925
	Marsh; ---; 84. ---; ---; 269 (Flooded pastures, irrigation ditches, shallow temporary ground pools)	Aitken	1954
	---; ---; 88°	Anonymous	1944 o
	---; July; 92. ---; ---; 136, 246, 357. Flooded meadow near river and partly shaded pools near highway; ---; 228. ---; Aug.; 300	Natvig	1948
	Flooded meadows and other temporary collection of water in the open, sunlit situation; bite persistently in the daytime; 98°, 331°	Edwards et al.	1939
	---; rural, April-Sept.; 98, 331	Marshall	1938
	Ditches, pits, puddles; ---; 108°. ---; ---; 155°, 300°	Shtakelberg	1937
	Flooded meadows; ---; 108, 155, 300	Edwards	1921
	Flood plains, recently flooded rice swamps, irrigation ditches; bites day and night; 109°	Rioux	1958
	Reservoirs, pools, pits, ditches, only in fresh water; ---; 109, 155, 300	Monchadskii	1936

TABLE 1 - MOSQUITOES (continued)

SPECIES	BLEEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AEDES vexans</i> (Meigen) (cont.)	---; enters houses; 109	Callet & Vermeil	1948
	---; on edge of rivers; 109	Seguy	1924
	Flooded meadows, sedgy moors; April-July; 119	Vogel	1933
	Flooded areas, forest ponds; ---; 119°. ---; 244. High water areas; a great pest; 301. Forests, bushes; ---; 353	Martini	1930
	Willow and alder plantations on meadow land; ---; 119	Peus	1932
	Usually dry meadows; ---; 119	Beisinger	1936
	Marshes; ---; 125	Pandzis	1935
	---; ---; 140	Martini	1928
	Flooded meadows, sunlit marshy fields; bites during the day; 155°	Anonymous	1945 b
	---; ---; 244°	Anonymous	1945 a
	Water overflowing banks of rivers; aggressive, bites in full sunlight, July, Sept.; 246°	Braga	1931
	---; ---; 255	Anonymous	1944 f
	Salt water areas, small pools without vegetation; ---; 295	Gil Coledo	1930
	Small ditches, flooded pools, fields by the river; amongst vegetation by day; 331°	Wright	1923
	Meadow pools; ---; 333	Martini	1921
<i>vittatum</i> (Bigot)	---; ---; 38, 348. Exposed rock pools in mountain stream beds; autumn; 295	Mattingly	1957
	River gorge, rivers, bridge; ---; 84. Rivers; ---; 269 (Accumulations of water in rock holes along water course)	Aitken	1954
	Rock pools; ---; 84	Edwards	1921
	Cracks in rocks bordering rivers, shady rock holes with water rich in organic debris; ---; 109°	Riouz	1958
	---; ---; 109	Mattingly	1954

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AELES</i> <i>vittatus</i> (Bigot) (cont.)	---; ---; 246, 295 (Holes in rocks, small but fairly deep, with decomposing matter, experimental vector of yellow fever, Sept.-Oct.) Artificial containers; ---; 295 Residual pools; ---; 295 ---; ---; 343 (Water butts and other domestic collections of water, rock pools and tree holes)	Gil Collado Shtakelberg Gil Collado Barraud	1935 1937 1930 1934
<i>zammitii</i> (Theobald)	---; ---; 109, 193, 295 Rock pools with concentrated sea water, bites at seashore by day and at dusk; 125°	Edwards Stephanides	1921 1937
<i>ALLOTHEOBALDIA</i> <i>longearolata</i> Macquart	---; ---; 109	Seguy	1925a
<i>ANOPHELES</i> <i>algeriensis</i> Theobald	Standing or slow-flowing water in swamps, ponds, pools and ditches with standing vegetation; bites outside at dusk; 6°, 58°, 84°, 155°, 246°, 255°, 269°, 278°, 295°. ---; bites outside at dusk; 87° Lake marshes; in stables, common; 6 ---; May, Aug., Nov.; 6 Clear or muddy water, with or without vegetation, in sun or shade; ---; 84 ---; widespread, lowland areas; 84, 269. (Sluggish streams and rivers, marshes in cooler month, clear fresh water, usually still and partially shaded) ---; bite only under exceptional circumstances; 84° ---; ---; 87 Fairly numerous in the shallowest parts of extensive Edwards but very shallow puddles among thick sedge, marshes, numerous at dusk, bites readily, in the open in calm dull weather or in sheltered spots at dusk and dawn; 98°. ---; ---; 343 ---; rural, Aug. and Sept.; 98 In semi-permanent ponds, in brackish collections of water with dense vegetation; ---; '09 ---; ---; 109*	Peus Bates Bates Sicart & Ruffie Aitken Anonymous Smart Marshall Doby et al. Rieux	1942 1941 1937 1960 1954 1944p 1943 1932 1938 1960 1958

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES algeriensis</i> Theobald (cont.)	Deeper and/or brackish waters; wet moor and bog lands; 119°	Baer	1960
	Garden pond; greenhouse, Jan.; 119	Weyer	1959
	---; ---; 124, 357 (Large marshes and sluggish streams with dense vegetation, bite freely in tents, rarely in houses, naturally infected with malaria)	Russell et al.	1943
	Marshes, irrigation ditches, cool waters in large swamp with rich and erect vegetation especially reeds; attracted to lights in houses, experimentally infected with malaria, common, May-Oct.; 125	Livadas & Sphangos	1941
	---; in houses, experimentally infected with <i>Plasmodium falciparum</i> , possible vector of malaria, bites freely especially in the open; 125°	Barber & Rice	1935
	---; May-Sept.; 125	Pandazis	1935
	---; ---; 140	Stone	1961
	Shady swamps and marshes covered by dense vegetation; rarely enters houses, abundant in spring and autumn, suspected vector of malaria; 155	Anonymous	1945b
	In water containing salt; in houses, bites in the open when almost dark; 155°, 269°, 341°	Martini	1929
	Shaded, small streams with gentle flow and with abundant vegetation; ---; 155	Cuboni	1926
	Reservoirs with high salt content; ---; 155*	Shtakelberg	1937
	---; ---; 246	Foote	1954
	Sluggish rivers and streams, swamps, base of juncas plants and <i>Phragmites</i> and other dense horizontal vegetation, prefer fresh, clear, still waters in partial sun; in dwellings, up to 800 m. altitude, all year, peak Aug.-Sept.; 269	Logan et al.	1953
	Coastal, marsh areas, saline water; ---; 295	Clavero & Romeo Viamonte	1948
	---; fields, during summer; 295	Gil Collado	1930

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES algeriensis</i> Theobald (cont.)	Lowland and lake swamps, ponds with much vegetation; houses and stables; 333 ---; possible vector of malaria; 333	Tischler	1950
	Marshes; ---; 348	Anonymous	1944 n
		Macan	1942
<i>atheniensis</i> Cardamatis	---; ---; 125	Stone et al.	1959
<i>atroparvus</i> Van Thiel	Brackish water; ---; 6 ---; ---; 92, 98, 109*, 140, 300. Brackish waters; Baer ---; 119° (Coastal, brackish and fresh waters, ponds, meadows, ditches and troughs, in houses)	Bates	1940
	Brackish water; enters houses; 98*, 109, 125, 155. Hackett ---; in houses, naturally infected with malaria during summer; 119*. Brackish water; in houses, Apr.-Aug., peak July-Aug.; 136*. Ricefields, fresh and brackish water; enters houses, carrier of malaria during summer; 246*, 295*	Hackett	1937
	---; near salty places, Feb.-Nov.; 119	Weyer	1959
	---; June-Aug.; 246	Bates	1941
<i>atroparvus</i> <i>atroparvus</i> Van Thiel	Littoral and continental rock pools, flood pools, wells, semi-permanent ponds, pools near rivers; ---; 109	Rioux	1958
<i>bifurcatus</i> Linnaeus	Standing or slow-flowing cool water in ditches and streambeds with much vegetation, in forest pools with shade or open swamps, wells, artificial containers; bites in shade by day; 6°, 84°, 87*, 109°, 155°, 255°, 269°, 278°	Peus	1942
	Marshes; in houses, Sept.-Oct.; 6	Blanc & Heckenroth	1918
	Cooler waters of forest and spring pools, slow-flowing streams; Aug.-Oct.; 34	Kupka & Anschau	1950
	Flood and swamp areas along rivers, tiled pools and ponds; ---; 34	Wenger	1947
	---; carrier of malaria; 34	Russ et al.	1921
	---; ---; 38	Kumm	1929
	---; ---; 45°	Goetghebuer	1925
	Ricefields; ---; 58	Silwensky	1927

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES bifurcatus</i> Linnaeus (cont.)	---; common; 84 At 5,000 feet elevation; in houses, carrier of malaria, abundant in early spring or late autumn; 87 ---; river lowlands and up to 300 m. altitude, in houses at night; 88° Margins of ponds rich with vegetation; dark forests, old gardens, in houses, especially bedrooms, bites at night, April-Sept., 92° Fresh water ponds, stagnant water and lakes, small depressions filled with surface water and hoofprints, low-lying marshes, spring-fed pools, in rocky riverbeds, in mud cliff, flowing ditches, grassy puddles by chalk streams, clay pit and bog holes in a meadow; occasionally in houses, bites day and night, common and widely distributed; 98°. River sides; ---; 152. Old marl-pit, swampy ground; bite readily in the evening; 272° Well-shaded permanent pools, ponds, artificial containers; all year; 98	Edwards Barber Komárek & Breindl Wesenberg-Lund Lang James Byrd	1928 1936 1941 1921 1918 1922 1922
	Dikes with banks overgrown with weeds; ---; 98	Blacklock & Carter	1920b
	Water in peat cuttings; ---; 98, 331	Blacklock & Carter	1920a
	---; experimentally infected with <i>Plasmodium vivax</i> ; 98.	Eckstein	1918
	Unclean swampy water, forest pools, meadow ditches, garden containers; in houses, forests and communities; 109	Bresslau & Glaser	1918
	In river overflow; in stables, most annoying between 2:00 to 4:00 a.m., July and Aug.; 109	Peju & Cerdier	1919
	Edge of woods; bites in evening; 109°	Dye	1922
	In washing house; Sept.; 109	Feytaud & Gendre	1919
	Cold water, fresh springs, shaded streams, covered fountains and wells; ---; 109		

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES bifurcatus</i> Linnaeus (cont.)	In water without floating vegetation; ---; 109 In marshes on plateau, in lakes; ---; 109 In muddy water with reeds, water holes; ---; 109 In valley fed by water; ---; 109 ---; Jan., Feb., April, May, June and Nov.; 109 ---; active during day, peak at 4:00 to 5:00 p.m.; 109 Shady, cold waters with vertical vegetations, artificial water places; wooded brush and boggy areas, naturally infected with <i>Plasmodium</i> ; 119 Swamps, shady waters surrounded by tall vegetations, springs, wells, fountains; in houses and stables, bites preferably at night, peak Aug.; 119°, 155° Drainage ditch, creek with cold spring, lake margins with vegetations; dark, warm stables, experimentally infected with <i>Plasmodium vivax</i> ; 119 Swamps, ponds; bite in cool, rainy weather, day and evening, Feb.-Nov.; 119° Bogs, marshes, damp grounds; woods, gardens; 119 Clear, cool standing or slow-flowing water, shady spring marshes and springs, lakes with streamlets shaded by sedges; ---; 119 Partly shaded ditches and springs, among rushes around pools; ---; 119 Ditches with cool water; ---; 119 Swamps, marshes, torrents, irrigation ditches with slow water, shallow wells, brick pits, open storage reservoirs; attracted to lights, in houses, experimentally infected with malaria; 125° Cool, shady ditches, springs, rills with slight current and vegetation; all year; 125	Seguy Leger Peju Hesse Eckstein Peju & Cordier Baer Martini Weyer Eckstein Martini Vogel Hecht Kirchberg & Petri Livadas & Sphangos Stephanides	1925a 1918 1920 1918 1919 b 1918 1960 1929 1951 1922 1920 1929 a 1929 1950 1941 1937

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES bifurcatus</i> Linnaeus (cont.)	Streams and pools, cannibalistic; ---; 125 ---; experimentally infected with <i>Plasmodium falciparum</i> ; 125 ---; ---; 136 ---; ---; 140 Marshes, clear and flowing water in shallow areas with vegetation, stagnant ditches, artificial ponds, hoofprints and cesspool; abundant and widely distributed, Oct.-Dec.; 153	Waterston Barber & Rice Van Thiel Lörincz Blacklock & Carter	1918 1935 1922 1937 1921
	Wells and troughs, cannibalistic; in houses and camp, naturally infected with malaria, March-Nov.; 155	Hargreaves	1923
	Reservoirs, swamps, bites day and night; 155*, 228*, 300°	Shtakelberg	1937
	---; ---; 244, 255, 300	Martini	1930
	Reed swamp margin of stagnant pond; ---; 272	Keir	1936
	Streams of clear water, ponds, pools with some algae; ---; 295	Gil Coilado	1930
	Puddles with reeds and <i>Glyceria plicata</i> ; bite in houses; 301°	Galli-Valerio & Rochaz de Jongh	1913
	Lake in park, canal with flowing water and reeds; ---; 301	Galli-Valerio	1926
	Puddles, lake, all winter; ---; 301	Galli-Valerio	1925
	In ditches, under ice in winter; ---; 301	Galli-Valerio	1934
	Places with green algae; ---; 301	Galli-Valerio	1932
	Artificial containers; ---; 301	Galli-Valerio	1921
	---; experimentally infected with malaria gametocytes; 301	Geigy	1945
	---; all year; 301	Galli-Valerio	1916
	In extremely foul pools, in marshes, wells, banks overgrown with weeds, in fresh springs and streams through woods; very common, all year; 331	Wright	1923
	Fresh or brackish water, domestic water; rarely enters houses, bites in daytime; 331°	Lang	1920

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>Anopheles bifuratus</i> Linnaeus, (cont.)	Fresh waters, springs, wells, cool shady ponds, mountain streams, bushes; April; 333	Martini	1921
	Slow-flowing waters with much vegetation; in houses and stables; 333	Tischler	1950
	---; ---; 333*	Apfelbeck	1928
	Wells; early spring; 357	Edwards	1921
	---; rare, May-June; 357	Joyeux	1918
	---; ---; 358	Weyer	1938
<i>cambournaci</i> Roubaud & Treillard	---; ---; 109	Peus	1942
<i>cardamatisi</i> Newstead & Carter	---; ---; 125	Cardamatis	1931
<i>chandoyei</i> Theobald	---; ---; 87	Edwards	1912 a
<i>claviger</i> Meigen	Shaded spring-fed pools; ---; 6	Bates	1941
	---; Sept.-Dec., peak Nov.; 6	Bates	1937
	---; June-Sept.; 6	Coluzzi	1941
	Wooded areas, bushes, overgrown marshy fields, cold water; common; 34	Anonymous	1944 k
	---; ---; 45	Anonymous	1944 c
	Standing or slow-flowing cool water in ditches and streambeds with much vegetation, forest pools with shade, open swamps, wells and cisterns; bites in shade by day; 58°, 246°, 295°	Peus	1942
	---; enters houses; 58	Anonymous	1944 j
	Along coast and interior, above 600 meters and at 1,160 meters; ---; 84	Aitken	1954
	Rocky basins without vegetation; ---; 84	Callot	1947
	---; bite only under exceptional circumstances; 84°	Anonymous	1944 p
	Cisterns, clean water near habitations, cool shaded streams, marshes; ---; 87*	Aziz	1934
	Wells used for irrigation and in mountain streams; ---; 87	Stratman et al.	1937

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES claviger</i> Meigen (cont.)	Mountain localities; ---; 87	Barber	1936
	Lowlands; at up to 3000 feet; 88	Komarek & Breindl	1941
	Cold water, water holes, overgrown ditches, springs; ---; 88	Anonymous	1944o
	Permanent ponds and lake margins, especially in shady situations; ---; 92	Boyd	1949
	Permanent and semi-permanent waters, shaded weedy pools and ditches, among reeds of lake and pond margins, tanks, saline waters; rural, all year; 98, 152, 272, 331	Marshall	1938
	Forest ditches, cement tanks, stagnant water, with vegetation, flooded meadows, small pools; bites during day, in shady sheltered places, Mar.-Oct.; 109°	Callot & Dao Van Ty	1945
	Rock pools, deep wells, clear cold water; ---; 109	Rioux	1958
	Feeds on algae and phytoplankton; damp river valley, Nov.-Feb.; 119°	Weyer	1959
	In weedy pools, ditches, weedy margins of lakes shaded by trees, greenhouses and artificial containers, in brackish water; bites indoors and outdoors; 124°	Edwards et al.	1939
	Shaded fresh water, able to withstand freezing; common, Feb.-March, July-Aug.; 124	Anonymous	1949
	Marshes, cool water with feeble current, with or without vegetation, shaded, fresh water; bites outdoors, Mar.-Sept.; 125°	Pandazis	1935
	---; outdoors, sometimes in spring and fall in living quarters; 125	Weidner	1950
	---; ---; 136	Anonymous	1944d
	---; ---; 140	Stone	1961
	---; naturally infected with malaria; 155. At elevations over 3000 feet; ---; 336	Anonymous	1945b
	---; on plain; 155	Seguy	1920a
	---; ---; 155*	Grassi	1924

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES</i> <i>claviger</i> (Meigen) (cont.)	---; ---; 228, 300. Springs, rivulets, interrupted rivers and streams, tanks and wells, water holes, ground pools, swamps, fresh, clear, still, shaded waters with horizontal vegetation, sunny or partial shaded; overwinter, seldom in houses, grottos, some at 1000-1300 m. altitude, all year, peak June and Dec.; 269	Logan et al.	1953
	Marshes, shallow rock pools, wells; ---; 244	Anonymous	1945a
	Irrigation ditches, slow current springs, artificial containers, clear, fresh water with dense vertical vegetation, sometimes in puddles; Feb.; 246	Cambournac	1944
	Overwinters as larva; Mar-Sept.; crepuscular; 246	Braga	1931
	Spring with clear water; ---; 246	Cambournac & Pitta Simoes	1944
	Ricefields; ---; 346*	Dugdale	1936
	---; plains, fields; 255*	Anonymous	1944
	Clean, fresh water; ---; 295	Torres Canamares	1945
	---; enters houses, Feb.-Nov.; 295	Sella	1921
	---; ---; 295*	Caziot	1920
	Caves and swamps, found up to 5000 feet elevation; possible vector of malaria; 333	Anonymous	1944 n
	Shaded pools and larger bodies of water; ---; 343	Macan	1942
	---; ---; 357	Nicot	1916
<i>claviger</i> <i>missirolii</i> Del Vecchio	---; ---; 155	Senevet	1948
<i>claviger</i> <i>petragnani</i> Del Vecchio	---; ---; 109	Sicart & Ruffie	1960
	---; ---; 155	Del Vecchio	1939
<i>claviger</i> <i>petragnani</i> race <i>sateliensis</i> Senevet & Andarelli	Ponds with or without vegetation, clear and cold water; ---; 84	Sicart & Ruffie	1960
<i>claviger</i> var. <i>pollutus</i> Torres Canamares	Clear springs and stream; Mar.-Oct.; 295	Torres Canamares	1945

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>Anopheles costalis</i> Theobald	Small ponds; ---; 125	Seguy	1929
<i>coustoni</i> Laveran	---; ---; 155	Rogazzi	1933
<i>culicifacies</i> Giles	---; ---; 87	Gough	1914
<i>d'thali</i> Patton	---; ---; 336, 343 (Breedes in a wide variety of habitats)	Macan	1942
<i>elutus</i> Edwards	Marshy lagoons; June; 6	Anonymous	1944e
	Coastal large shallow lagoons, saline water; ---; 6*. ---; in houses; 58°. Shallow standing water, with vegetation; in houses to bite; 125*°. Marshes; ---; 155°, 255°, 333°	Hackett & Missiroli	1935
	Coastal regions; ---; 6. Brackish waters, lagoons; Tischler in houses and stables; 333	Tischler	1950
	Fresh water; ---; 6°. Pools; ---; 125°. ---; ---; 341°, 357*	Hackett	1937
	---; July-Oct.; 6	Coluzzi	1941
	---; ---; 34, 140 (Dangerous vector of malaria)	Martini	1929
	Swamps and lagoons in coastal areas with warmed brackish or saline water; enters houses at dusk, bites readily; 84°, 87°, 246°, 269°, 278*°, 295°	Peus	1942
	Brackish and fresh water; naturally infected with malaria; 87*	Barber	1936
	---; ---; 109	Kumm	1929
	---; ---; 119, 357	Seguy	1924
	Small or large swamps, ricefields, ditches, borrow pits, coastal swamps with brackish or saline water with vegetation exposed to the sun; in houses by day, active in the evening until dawn, naturally and experimentally infected with malaria, attracted to lights, May-Oct., peak July; 125	Livadas & Sphangos	1941
	Stagnant water in or near woods; naturally and experimentally infected with <i>Plasmodium vivax</i> and <i>P. falciparum</i> ; 125	Barber & Rice	1935
	Seashore; rare; 125	Stephanides	1938

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES elutus</i> Edwards (cont.)	---, along coast; 125 ---; April; 125 Places where fresh and salt water mix, salt beds flooded with fresh water, naturally infected with malaria; 155 ---; in houses; 155 ---; ---; 155* Brackish water; ---; 255 ---; May-Sept.; 333 ---; ---; 341*. Coastal marshes; ---; 343	Zschucke Pampana Krieg La Face Neri & Gratch Martini Mühlens & Sfarcic Macan	1951 1941 1950 1926 1938 1934 1925 1942
<i>gambia</i> Giles	All kinds of small water collections, standing or slow flowing, vegetated or not, preferably in sun, brackish water, artificial containers; bites indoors and out, mostly at sunset, also by day; 125°	Peus	1942
<i>hellenicus</i> Peus	---; ---; 125	Stone et al.	1959
<i>hispaniola</i> (Theobald)	---; ---; 155. In mats of spirogyra growing over gravel in very shallow water of exposed stream bed, in water cress, clear, slow and fast moving waters; domestic shelters, abandoned mine shafts, grottoes, vegetations, May-Nov., peak Aug. and Sept.; 269° Brackish water in pools and puddles of river or streambeds with or without vegetation, irrigation ditches; ---; 246	Logan et al.	1953
	---; ---; 246. Clear, sunlit water, in small pools or slow streams in association with Spirogyra; ---; 295*	Foote	1954
	Back waters of slow current, rocky bottoms and abundant vegetation, pools, puddles, river margins, canals of fast current and covered with abundant vegetation; bites at night and at day during sunny hours; 295°	Gil Collado	1930
	Biology very variable, depending on location; all year, peak Sept.-Feb.; 295	Dias Flores & Gil Collado	1932

TABLE I - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES hispaniola</i> (Theobald) (cont.)	Small pools, dried-up streambeds; ---; 295	Macan	1942
	Springs, watersheds; ---; 295	Martini	1930
	Saline water; ---; 295	Edwards	1921
	Mountain zones; ---; 295	Caziot	1920
	Large and small areas with much or less vegetation, swamps, ponds, ditches, rivers and streams; ---; 343	Smart	1943
<i>hyrcanus</i> (Pallas)	Swamps with shallow, standing water, coastal areas, marshes, pond margins and river beds, ditches, seepages, fresh, brackish or occasionally polluted water; bites outside at night; 6°, 58°, 84°, 87°, 109°, 125°, 155°, 246°, 255°, 269°, 278°, 295°	Peus	1942
	Lake marshes and occasionally in coastal plain; common; 6. ---; in houses and stables; 357	Bates	1941
	---; forest, bite only under exceptional circumstances; 84°	Anonymous	1944 p
	---; ---; 84 (Coastal marshes, ricefields)	Aitken	1954
	---; ---; 87	Smart	1943
	---; bites at sunset; 109°	Brumpt	1942
	Small and large collection of cool water with thick erect vegetation, ricefields with permanent irrigation system, swamps fed by irrigation and spring water; ---, 125	Livadas & Sphangos	1941
	---; in houses, common during warm weather; 125°	Barber & Rice	1935
	---; ---; 140	Stone	1961
	Large coastal marshes; ---; 155, 343	Boyd	1949
	---; ---; 246	Foote	1954
	Ricefields; ---; 295	Gil Collado	1930
	Ricefields; ---; 343	Macan	1942
	Swamps with much herbage, lake margins, lowlands; ---; 333	Tischler	1950
	Abundant in ricefields; ---; 333°	Kostitch	1937
	Large marshes near the sea; ---; 343	Edwards	1921

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES</i>			
<i>hyrcanus</i>	---; ---; 333	Anonymous	1944 n
<i>hyrcanus</i> Pallas	---; ---; 357 (Marshes and ricefields, possible minor vector)	Russell et al.	1943
<i>hyrcanus</i> var. <i>pictus</i> Loew	---; ---; 87	Smart	1943
	---; ---; 357	Edwards	1929
<i>hyrcanus</i> <i>pseudopictus</i> Grassi	---; ---; 6*	Pettazzi	1942
	Ricefields; enters houses; 58	Anonymous	1944 j
	Ricefields, warm swamps with algae; ---, 58	Silwensky	1927
	---; ---; 84	Rioux	1958
	---; bites in sunlight; 87°	Aziz	1934
	Marshy lakes overgrown with weeds, bites in the afternoon; 109°	Treillard	1942
	---; bites at sunset, Sept.; 109°	Rioux	1953
	---; ---; 125	Cardamatis	1931
	Open marshes, ricefields; ---; 155	Anonymous	1945 b
	Brackish water; ---; 255	Anonymous	1944 f
	---; enters houses, bites also in the open, July-Sept.; 255°	Zotta	1932
	---; ---; 269, 278, 341	Senevet & Andarelli	1956
	Ricefields and on coast; ---; 295*	Pittaluga	1929
	---; possible vector of malaria; 333	Anonymous	1944 n
	---; ---; 343	Smart	1943
	---; ---; 357	Edwards	1921
<i>hyrcanus</i> <i>sinensis</i> Wiedemann	---; ---; 125	Cardamatis	1931
	---; ---; 255	Zotta	1927
<i>italicus</i> Raffaele	Flowing water in mountains; enters houses; 125	Pandazis	1935
	Brackish water in pools and puddles of river or streambeds, with or without vegetation, irrigation ditches; ---; 125, 155	Peus	1942

TABLE I - MOSQUITOES (continued)

SPECIES	SPEEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>Anopheles</i> <i>kochi</i> Donitz	---; ---; 193	Manson & Ramsay	1933
<i>labradoriae</i> Falleroni	---; ---; 5 ---; ---; 84 ---; ---; 155*, 269°, 278°, 295*, 341°, 343° Coastal swamps to mountains open sunny pools, brackish and fresh water; domestic, overwinter in a state of semi-hibernation; 269*	Bates Stone et al. Hackett Logan	1940 1959 1937 1950
<i>latro</i> <i>atroparvus</i> Van Thiel	Fresh water streams; coast; 45 ---; ---; 88. Brackish waters; ---; 140. Brackish water, shores; inland; 255* Margin of ponds, streams, brackish water in ditches and pools; inland, overwinter in warm buildings and dwellings, April-Sept.; 98*. ---; potential vector of malaria; 124 Margins of ponds and streams of weeds, brackish ditches and pools; bite freely at dusk or during evening and generally indoors, April-May; 98° Brackish water along coastal areas; ---; 109 Brackish water along coastal areas, marshes; enter houses, June-Aug.; 119*	Anonymous Anonymous Anonymous Anonymous Anonymous	1944c 1944f 1959 1949 1955
	Salty soil conditions; ---; 119, 140. ---; carrier of malaria; 136, 246, 255. Fresh water; ---; 155. Fresh water; carrier of malaria; 295 ---; ---; 124, 155, 246*, 295*, 300 (Brackish coastal and fresh inland waters, in house, feed readily, responsible for "house malaria" in winter) Brackish water, narrow ditches with floating horizontal vegetation; enters and hibernate in houses during winter, naturally infected with malaria, bite man indoors, all year; 136* In slightly alkaline water; ---; 140* Saline water along the coast; ---; 152 Brackish water along the coastal marshes; vector of malaria in the area of the Po delta and the northern coast; 155*	Boyd Russell et al. Anonymous Anonymous Anonymous Anonymous Anonymous	1949 1943 1944 d 1945 1946 1945 b

TABLE I - MOSQUITOES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES</i> <i>labranchiae</i>	---; ---; 244	Anonymous	1945a
<i>ctroparvus</i> Van Thiel (cont.)	Brackish water along the coastal areas, in land fresh water; overwinter in houses; 246°, 295°	Foote	1954
	Shaded or sunny, standing or slow-flowing, brackish and clear water; in houses at dusk; 246, 295	Peus	1942
	Ricefields; May-Aug., peak April, May; 246°	Cambournac	1944
	Pits, ricefields; shelter under bridges, all year, especially July-Sept.; 295	Pittaluga	1932
	River pools; ---; 295	Torres Canamares	1945
	---; ---; 300	Anonymous	1944 h
<i>labranchiae</i> <i>labranchiae</i> Falleroni	Dried-out water courses, ponds, marshes, unused canals, neglected drainage canals; enters houses, May-Aug.; 84*°	Anonymous	1944 p
	Fresh water, sunny exposures, coasts, river valleys; Aitken ---; 84 (Responsible for malaria transmission)		1954
	Brackish water marshes and lagoons along coast, interior fresh waters; in houses; 155°. Water courses, streams, shallow ground pools, swamps with <i>Ranunculus aquatilis</i> and other vegetation, slow moving and stagnant waters, springs, rice- fields, ditches, fresh water; overwinter, in stables and houses, naturally infected with malaria; 269*°. Interior fresh waters; ---; 278	Logan et al.	1953
	---; most important malaria vector in central and southern region; 155*. ---; ---; 269, 278* (Brackish and fresh water; enters houses, freely bites man, active only just after sunrise and before sundown)	Anonymous	1945 b
	---; ---; 155, 343. Coastal marshes, beds of upland streams; ---; 278 (Maritime distributions, brackish marshes and lagoons, bite readily, associated with malaria)	Boyd	1949
	Fresh water of ricefields and streams, brackish water along the coastal areas, also in inland fresh water; enters houses; 246*°, 295*°	Foote	1954
	Mountain areas; ---; 269	Hackett & Missiroli	1935

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES</i> <i>labranchiae</i> <i>labranchiae</i> <i>falleroni</i> (cont.)	---; ---; 295 (Brackish coastal marshes, fresh water of ricefields and upland streams, enter houses in large numbers, prefer humans, important vector of malaria)	Russell et al.	1943
	Brackish and fresh water; hibernate in houses; 333*	Anonymous	1944n
<i>labranchiae</i> <i>sicaulti</i> Roubaud	Gardens; ---; 84	Sicart & Ruffie	1960
<i>macedoniensis</i> Cot & Hovasse	---; ---; 125	Cardamatis	1931
<i>maculipennis</i> Meigen	Spring-fed pools, ponds, ditches, marshes and small streams; common and generally distributed; 6	Bates	1941
	Marshes; naturally infected with malaria, in houses; 6	Blanc & Heckenroth	1918
	Brackish water; ---; 6	Eugling	1921
	---; all year, peak June-July; 6*	Putnam & Hackett	1947
	Flood and swamp areas along rivers, pools and ponds made with tiles; May and June; 34	Wenger	1947
	---; in closed rooms; 34*	Kupka & Anschau	1950
	---; ---; 38, 153	Kumm	1929
	Wet fields, meadows; all year active; 45°	Goetghebuer	1925
	Ricefields; ---; 58	Konsuloff	1922
	Standing or slow-flowing, sunny or shaded, vegetated, fresh or brackish, clear water in ponds, pools, swamps, ditches, streams, stream-beds, artificial containers; in houses at dusk at night; 84°, 87°, 92°, 109°, 155°, 269°*. ---; mountains; 125. Shaded or sunny, standing or slow-flowing, clear water; in houses at dusk and night; 246	Peus	1942
	Cisterns, deserted areas; ---; 84*	Sautet	1934
	Canals with vegetation; ---; 84	Sargent & Sargent	1922
	---; common in lowlands; 84	Edwards	1928
	---; ---; 87	Smart	1943

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>Anopheles maculipennis</i> Meigen (cont.)	Reservoirs, dunghill pools, pools with grassy vegetation, sunlit marshy borders of larger ponds and small lakes, brackish water; hibernate in outbuilding, in houses in winter, stables, woodlands, meadows, coastal marshes, sandy country, common, May-Nov.; 92°	Wesenberg-Lund	1921
	Edges of grass bordered ponds, forests; ---; 92	Wesenberg-Lund	1919
	Clear water of permanent deep pools with swampy margins overgrown with vegetation, muddy water containing duckweed, hoofmarks of permanent marshy ground, in boggy situations, brackish pools, shaded stagnant ditches, lake margins, creeks, in excavations, along backwaters, riversides, springs, stone trough of slow running water, artificial containers; common indoors in springtime, widely distributed, bites all year; 98°. ---; enter houses to bite; 152°. ---; bite in the evening; 272°. Running streams through a marsh; in houses; 331	Lang	1918
	Shallow margins of weedy, but not foul, calm, open water, brackish water dykes; inside buildings by day, active and bite in the evening, common Apr.-Sept.; 98, 131°. ---; common; 152, 272	Lang	1920
	Large and shallow pond with grassy edges and in artificial streams; ---; 98	Jarvis	1919
	Backwaters of river; ---; 98	Macan	1939
	---; bites at dusk and during the night indoors; 98*	Moore Hogarth	1928
	Ocean bays; ---; 108. Marsh meadows, ditches with slow-moving fresh water and in salty waters; ---; 119	Weyer	1935
	---; June-Aug.; peak July; 108*. ---; ---; 355	Anonymous	1944 m
	---; common; 108, 256. Around big lakes; ---; 300	Anonymous	1944 h
	Swamps, forest pools, meadow ditches, drains, garden containers, road ruts; overwinter in cellars and sheds, bite indoors; 109°	Eckstein	1918
	In river overflow; most annoying between 2:00 to 4:00 a.m.; 109°	Bresslau & Glaser	1918

TABLE I - MOSQUITOES (continue !)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES maculipennis</i> Meigen (cont.)	Edge of woods; active in the evening; 109	Peju & Cordier	1919
	Marshes; naturally and experimentally infected with malaria; 109	Swellengrebel et al.	1929
	Slow moving rivers with vegetation, fields, ponds and marshes with reeds and putrid slime, pools with refuse, fountain basins; ---; 109*	Niclot	1918
	In Mediterranean deltas on beaches or in salt water with marine fauna; ---; 109	Leger	1918
	Effluents and affluents of lakes; ---; 109	Catenei	1936
	In quarries; ---; 109	Dye	1922
	Treeholes; ---; 109	Hedeen	1955
	---; enters houses, carrier of malaria; 109°. Fresh and salt water; overwinter in houses; 136*. Ricefields; enters houses; 155°, 295	Hackett	1937
	---; in houses during day, active outside at night; 109	Peju & Cordier	1918
	---; forests, bushes, April and May; 109	Eckstein	1919b
	---; experimentally infected and experimental transmission of <i>Plasmodium vivax</i> ; 109	Roubaud	1918
	---; June-Oct., peak July-Aug.; 109	Mandoul	1919
	---; ---; 109, 119. ---; ---; 155, 228. ---; April; 244 (Very bloodthirsty, prefer to bite at night or evening, bites indoors and out, prefer shade and darkness to light)	Martini	1930
	---; ---; 109*	Walsh	1918
	Clean, slow-flowing waters, puddles, ponds, lake margins, reedy streams, rain barrels; overwinter in cellars, sheds unoccupied dark rooms; 119°	Eckstein	1922
	Standing clean, sunny and vegetated waters, ponds, pools, seashores, pastures, meadows, swamps; all year; 119	Weyer	1938
	Marshes, moors, swamps, ditches, water barrels; ---; 1°9	Martini	1920
	Marshplants, submerged moss and waterplants; ---; 119	Tanzer	1923

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES maculipennis</i> Meigen (cont.)	Bomb craters, trenches, sunny waters; ---; 119	Kirchberg & Petri	1950
	Marshlands, weedy inlets; ---; 119	Martini	1923
	Springs, brackish water; ---; 119	Anonymous	1944 a
	Ponds, slow-moving streams with surface vegetation, open sunlit and tree-shaded waters; domestic, overwinter, all year; 124	Marshall	1938
	---; may hibernate in outbuildings; 124	Harvey & Hill	1947
	---; ---; 124, 343, 357 (Commonly in open, weedy water in lowlying districts, sometimes in brackish water near the coast)	Edwards	1921
	Smail or large swamps fed by surface or underground water, marshes, torrents, river banks with rich vegetation, flumes with slow water, ricefields with permanent irrigation system, stagnant collection of water in borrow, clay or sand pits, wells and open storage reservoirs; in houses by day, active in the evening until dawn, naturally and experimentally infected with malaria, transmit malaria during the first part of summer, common; 125*	Livadas & Sphangos	1941
	Shallow pools and irrigation ditches with aquatic vegetation exposed to sunlight, along the edges and backwaters of drainage canals, brackish water and fresh water springs; bites after sunlight; 125°	Stephanides	1937
	Standing clean waters with loose, vertical and low vegetation, algae pads, <i>Lemna</i> and <i>Phragmites</i> , large and small swampy lake margins, slow-flowing streams, springs, cisterns, waters with low salt content; bedrooms; 125	Weidner	1950
	Stagnant water mostly in or near the woods; ---; 125	Barber & Rice	1935
	---; domestic, crepuscular and nocturnal, April-Nov.; 125	Pandazis	1935
	---; infected with malaria sporozoites; 125. ---; July; 357	Joyeaux	1920
	Narrow ditches with vegetation; ---; 136	Swellengrebel	1922
	Overgrown irrigation ditches, disused clay and lime pit, partly dried up beds and streams, in swamps, in ponds with dense vegetation on their banks; cellars; 140	Kaman	1928

TABLE I - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>Anopheles maculipennis</i> Meigen (cont.)	Ponds; ---; 152	Birrell	1946
	---; rare; 152	Wilson	1937
	---; in houses, Oct.-Dec.; 153	Blacklock & Carter	1921
	Water containing <i>Spirogyra</i> , water troughs, seepage areas, footprints; railway carriages, empty stone dwelling, in camps, hibernate in sheds and stables, naturally infected with malaria, Jan., April, May, Oct. and Nov.; 155	Hargreaves	1923
	---; May-June; 155	Grassi	1925
	---; ---; 155*, 348	Shtakelberg	1937
	Pond near highway, inundation pool, pond near seashore, pool with seaweed near seashore; in cellar of house; 228	Natvig	1948
	Inlets; ---; 228	Natvig	1928
	Waters with <i>Lemna trisulca</i> ; June-Sept.; 244	Blank-Weissberg	1928
	Clear water of slow current exposed to sun, ricefields, puddles and sometimes in treeholes; houses, bites especially at night, suspected transmitter of intermittent fever; 246°	Cambournac	1944
	Clear, quiet water with much vegetation, fresh or brackish; races vary in domesticity and attraction to man; 246*	Braga	1931
	---; ---; 255, 341	Martini	1928
	Clear, sunny waters of slow currents, river margins with abundant vegetation, muddy water; bites especially at night and during day in dark rooms; 295°	Gil Collado	1930
	Irrigation zone along coast, ponds and standing water; in houses; 295	Amelivia	1930
	---; all year, peak May-July, Oct.-Nov.; 295	De Buen	1935
	---; common; 295	Pittaluga	1929
	Fresh water in hilly sections; ---; 300	Russell et al.	1943
	---; ---; 300, 343. ---; common and ubiquitous; 341 Boyd (Ditches, small pools, slow-moving streams)	Boyd	1949

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES maculipennis</i> Meigen (cont.)	Puddles, lake in park, canal with flowing water and reeds; May-Oct.; 301	Galli-Valerio	1926
	In ditches; Feb.-Mar., May, July-Aug.; 301°	Galli-Valerio	1934
	Old wine casks, ditch with <i>Lemna palustris</i> ; ---; 301	Galli-Valerio & Rochaz de Jongh	1913
	Lake, waters without plants, all winter; ---; 301	Galli-Valerio	1925
	Dirty water, artificial containers; ---; 301	Galli-Valerio	1921
	Places with green algae; ---; 301	Galli-Valerio	1932
	Any moderately clean water with vegetation in the least shaded situations, swiftly running streams, rain-water tanks; common and widely distributed; 331. In pools thickly covered with <i>Lemna minor</i> and <i>Elodea canadense</i> ; ---; 357	Wright	1923
	Ditches; hibernate in farm buildings, all year; 331	Wright	1924
	Hoofmarks, rivers, lakes with much vegetation, algae and reeds, still waters, swamps, rain-barrels, cisterns and at high altitudes; in houses, March, April and June; 333°	Martini	1921
	Rain water cisterns and artificial containers exposed to the sun and protected by superficial vegetation; ---; 333*	Anonymous	1944 n
	---; dwellings, hotel room, inn, naturally infected with malaria cysts, May, July-Oct.; 333	Mühlens & Sfarcic	1925
	Coastal regions in slightly saline pools, marshes and ditches; ---; 343	Macan	1942
	---; common, in houses; 357	Joyeaux	1918
<i>maculipennis</i> var. <i>alexandraeshin-garevi</i> Shingarev	---; ---; 244	Tarwid	1933
<i>maculipennis</i> <i>atroparvus</i> Van Thiel	Brackish water of varying degrees of salinity up to one-third that of seawater; in houses, Aug.; 124°	Edwards et al.	1939
	---; in houses, may be a malaria vector; 155°	Missiroli	1938
	---; ---; 333	Lepes & Vitanovic	1962

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES</i> <i>maculipennis</i> form <i>atroparvus</i>	---; ---; 98, 119, 246. Waters of appreciable salinity; ---; 140. Inland fresh waters; ---; 155, 295. Coastal brackish waters; ---; 336	Bates & Hackett	1938
<i>maculipennis</i> race <i>atroparvus</i> Van Thiel	---; ---; 6	Hackett & Bates	1936
	---; ---; 92, 98, 109, 155, 246, 255, 295, 300 (Brackish waters). On ocean coasts, marshes, brackish waters, pools, ditches; overwinters in stables, in dwellings; 119. Brackish waters; ---; 136. Ocean coast, brackish water; July; 244. Brackish waters; ---; 358	Weyer	1938
	Salt water ocean coasts and marshes, fresh waters; ---; 119	Weyer	1935
	---; March-Dec.; 119*	Weyer	1951
<i>maculipennis</i> var. <i>atroparvus</i> Van Thiel	Fresh and saline water; ---; 45. Fresh water; ---; 136	Rodhain & Van Hoof	1942
	---; ---; 58	Mollow	1938
	---; ---; 84	Van Thiel & Sautet	1937
	Standing or slow-flowing, sunny or shaded, fresh or brackish, clear water, ponds, pools, swamps, ditches, streams and streambeds, cisterns, artificial containers; enters houses at dusk and night; 92°. Coastal marshes; ---; 119	Peus	1942
	Salt water lakes; ---; 92. In coastal areas in low-lying brackish water; ---; 98, 331. ---; hibernate in houses; 108. ---; ---; 109, 244, 333. Salt springs and lakes, marshes; in houses during summer; 119*. Brackish water in low coastal areas; in houses to bite, carrier of malaria; 136*. In cool and slightly polluted water, marshes; Nov.-Dec.; 155. Fresh water, ricefields; bites all winter, carrier of malaria; 246*, 295*. River valleys; carrier of malaria; 255*	Hackett & Missiroli	1935
	---; experimentally infected with malaria; 98	Shute	1940
	Brackish water; ---; 109	Roubaud et al.	1935
	Cement tanks; ---; 109	Callot & Dao Van Ty	1945

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES</i> <i>maculipennis</i> var. <i>atroparvus</i> Van Thiel (cont.)	---; farm buildings; 109	Roubaud & Treillard	1941
	---; ---; 109°	Brumpt & Dao Van Ty	1942
	---; in and outside city; 119	Heinz	1949
	Brackish ditches; enters houses, bite during hibernation in houses, all year; 136°	Swellengrebel	1932
	Brackish water, near fresh water; houses; 140	Lörincz	1937
	Places where fresh and salt water mix, salt beds flooded with fresh water; ---; 155	Krieg	1950
	---; in houses, Feb.-Oct.; 155	Ottolenghi & Rosa	1935
	Sunlit fresi. or brackish water; ---; 246, 295	Senevet & Andarelli	1956
	---; May-June; 246	Cambournac & Pitta Simoes	1944
	Salt marshes, coastal lakes; suspected vector of malaria; 255	Martini	1934
	---; mountains and at sea level, in dry and humid regions; 295	Gil Collado	1937
<i>maculipennis</i> <i>basili</i> Falleroni	---; ---; 155	Pecori & Escalar	1933
	---; ---; 295	Gil Collado	1937
<i>maculipennis</i> race <i>cambournaci</i> Roubaud & Treillard	---; ---; 109	Treillard	1937
	Shaded or sunny, standing or slow-flowing water, clear; in houses and stables at dusk and night; 246	Peus	1942
<i>maculipennis</i> var. <i>elutus</i> Edwards	Brackish water; ---; 155	Missiroli	1938
	---; in houses, Apr.-Oct.; 155	Ottolenghi & Rosa	1935
<i>maculipennis</i> race <i>fallax</i> Roubaud	Fresh water; ---; 109	Roubaud	1934
	---; ---; 246	Cambournac	1944
	---; ---; 333	Tischler	1950

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES maculipennis</i> <i>labranchiae</i> (Falleroni)	---; ---; 58	Dryenski	1939
	---; common on shores, N. E. mountain region; 84	Senevet & Andarelli	1956
	Slightly brackish water; ---; 155*	Missiroli	1938
	---; ---; 155*	Faccioli	1935
	---; ---; 269*	Logan	1950
<i>maculipennis</i> form <i>labranchiae</i>	---; common; 84, 269. Coastal areas; in stables; 155. From coastal marshes to gravelly beds of upland streams; common; 278	Bates & Hackett	1938
<i>maculipennis</i> race <i>labranchiae</i> Falleroni	Brackish water; ---; 155	Roubaud et al.	1935
	---; in houses, June-Sept.; 155	Compagnini	1935
	Small pools, irrigation ditches; ---; 295	Gil Collado	1937
	---; ---; 300	Ekbom	1935
<i>maculipennis</i> var. <i>labranchiae</i> Falleroni	---; common in Eastern plain, bites in open; 84**	Sautet & Marneffe	1943
	---; crevices in tree bark and between roots of trees, Sept.; 84	Sautet	1937
	Interior fresh water; ---; 155, 278. ---; ---; 269, 295, 333 (Brackish water marshes and lagoons along coast, bites man)	Hackett & Missiroli	1935
	Brackish water along coast and inland; ---; 300	Russell et al.	1943
	Coastal plains and lakes; ---; 333	Tischler	1950
<i>maculipennis</i> <i>maculipennis</i> Meigen	All types of breeding places, small accumulations of water, pools, ditches, small streams and large marshes, rocky streambeds; in stables, ubiquitous; 6. Ditches, pools, slow-moving streams; rare; 140	Bates & Hackett	1938
	Small and large bodies of water, slow streams; suspected vector of malaria; 6	Anonymous	1944e
	Shaded ponds, . to the sun; ---; 6*, 125*. ---; ---; 136. Marshy areas in the coast; ---; 155. Missiroli Hill streams; ---; 341. Lakes and streams; ---; 356 (Fresh and pure water in upland areas).	Hackett & Missiroli	1935
	---; June-Sept.; 6	Coluzzi	1941

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES</i> <i>maculipennis</i> <i>maculipennis</i> Meigen (cont.)	Cold, clear springs and mountain pools at 3,000 feet or higher; abundant; 34*	Anonymous	1944k
	---; ---; 45, 87	Senevet & Andarelli	1956
	Fresh running water in plains or hilly regions, in springs or stagnant water, in borrow pits or close to the seacoast; ---; 58*	Anonymous	1944j
	---; ---; 84, 357 (Fresh water, mountain and cold water)	Anonymous	1944 p
	Still pools with vegetation; bites indoors or near houses, found up to 2,000 feet; 88	Iltis	1921
	Cold clear ponds in hilly country with abundant influx of clean, fresh water; ---; 88*. Running water and in presence of vegetation; ---; 357	Anonymous	1944 o
	---; more common in hills than in plains, in houses at night; 88°	Komárek & Breindl	1941
	---; ---; 108	Anonymous	1944 h
	Fresh water in hilly sections; ---; 109	Hedeen	1955
	Standing or slow flowing, sunny or shaded vegetated, fresh or brackish, clear water in ponds, pools, swamps, streams, streambeds, cisterns; in houses at dusk and night; 119°. Predominantly in mountains, standing or slow-flowing, sunny or shaded, fresh or brackish, clear water in ponds, swamps, ditches, artificial containers; in houses, bites at dusk and night; 255°. Sunny, clear, fresh or brackish, standing or flowing water with floating vegetation in small water collections and artificial containers; in houses and stables; 295°	Peus	1942
	Artificial containers, bomb craters, ditches, lake margins with vegetation; experimentally infected with <i>Plasmodium vivax</i> , Sept.; 119*	Weyer	1951
	Irrigation fields; ---; 119, 358. ---; mountains and lowlands; 244, 300, 333	Weyer	1938
	---; in and outside city; 119	Heinz	1949
	---; dams, March-Aug.; 119	Weyer	1939

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES maculipennis</i>	Large marshes or ponds, small stagnant bodies of water; carrier of malaria; 125	Anonymous	1944 i
<i>maculipennis</i> Meigen (cont.)	Hilly regions, along river banks, forested areas, small rivers, swollen to torrential proportions, surrounding lowlands, vast marshy tracts, partially dried beds of streams; ---; 140*. ---; ---; 255*	Anonymous	1945
	---; houses and stables, April-Oct.; 140	Lörincz	1937
	Places where fresh and salt water mix, salt beds flooded with fresh water; ---; 155	Krieg	1950
	Slightly brackish water; ---; 155	Missiroli	1938
	---; in mountains and lowlands, usually in the vicinity of running water, in a sunny locale, pools, ponds, ditches, canals, bites occasionally; 155°. ---; ---; 278	Anonymous	1945 b
	---; in houses, Feb.-Oct.; 155	Grassi	1921
	---; common, June-Aug., peak July; 228	Anonymous	1944 b
	Fresh water in hilly sections, collections of stagnant water in ditches, ponds and along lake shores; ---; 244*	Anonymous	1945 a
	---; hilly regions, along river valleys, near forests, doubtful vector of malaria; 255	Anonymous	1944 f
	Pits, ricefields; enters stables and huts, shelter under bridges, all year, heavy July-Oct.; 295	Pittaluga	1932
	In fresh water in hills; ---; 301	Anonymous	1944 i
	---; experimentally infected with malaria gametocytes; 301	Geigy	1945
	Ubiquitous; ---; 333	Fischler	1950
	---; in houses, readily bites, July-Oct.; 333*°	Kostitch	1937
<i>maculipennis</i> <i>melanoon</i> Hackett	Gardens and forests; ---; 84	Sicart & Ruffie	1960
	Cement tanks; ---; 109	Callot & Dao Van Ty	1945
	Ricefields; ---; 155	Hackett & Missiroli	1935

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES</i> <i>maculipennis</i> <i>melanoon</i> Hackett (cont.)	---; in houses; 155 Sunny, clear, fresh or brackish, standing or slow-flowing water with floating vegetation in small water collections and artificial containers; in houses and stables; 295	Faccioli Peus	1935 1942
	Rice ponds, irrigation ditches, water with abundant vegetation; ---; 295°	Gil Collado	1937
	---; ---; 301	Senevet & Andarelli	1956
<i>maculipennis</i> form <i>melanoon</i>	---; ---; 155	Bates & Hackett	1938
<i>maculipennis</i> var. <i>melanoon</i> Hackett	---; ---; 6. Marshes; ---; 109. Ricefields and marshes; ---; 155. Rice cultivations; ---; 295 In marshes; ---; 301	Hackett & Missiroli Anonymous	1935 1944
<i>maculipennis</i> <i>messeae</i> Falleroni	Lakes region; suspected vector of malaria; 6 Lake marshes, shallow water with vegetation, streams, pools and ditches; ---; 6 Fresh water; ---; 6, 119. Brackish water pools; ---; 125. Fresh and moderate salt water; ---; 136. ---; ---; 341 Collections of clean fresh water with plenty of vegetation, such as permanent ponds and weedy margins of slow-moving streams, artificial containers with green algae; hibernates in houses, cellars and lofts, bite indoors at night, April-May; 124°	Anonymous Lewis Hackett Edwards et al.	1944 e 1939 1937 1939
	Permanent, stagnant water; in houses, naturally infected with malaria, common in spring and summer, all year; 125°	Rice & Barber	1937
	---; ---; 155°	Missiroli	1938
	---; ---; 301	Senevet & Andarelli	1956
	---; ---; 333	Lepes & Vitanovic	1962
<i>maculipennis</i> form <i>messeae</i>	---; ---; 6, 125, 333, 336, 341 (Great inland river valleys and in large marshes)	Bates & Hackett	1938

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES maculipennis</i> race <i>messeae</i> Falleroni	Inland waters; ---; 6, 58, 92, 98, 109, 136, 155, 255, 295, 300, 333. Pools, ditches, river valleys, swamp meadows, water overgrown with reeds; stables, seldom in houses, overwinter in attics and graineries; 119. Fresh waters, seldom salt waters; ---; 244. Along coasts, fresh and brackish waters; ---; 358	Weyer	1938
	Lakes, coastal river plains; ---; 6, 333	Tischler	1950
	Marshes, lake margins with vegetation; March-Dec.; 119*	Weyer	1951
	Brackish and fresh inland waters; ---; 119	Weyer	1934
	Places where fresh and salt water mix, salt beds flooded with fresh water; ---; 155	Krieg	1950
	---; Feb.-Oct.; 155	Ottolenghi & Rosa	1935
	---; ---; 269	Hackett & Missiroli	1935
<i>maculipennis</i> var. <i>messeae</i> (Falleroni)	Shaded ponds open to the sun; ---; 6*. ---; ---; 58, 92, 98. Lake marshes; ---; 119. Cool, open, fresh water in partly shaded places in or near the woods, in standing water; ---; 125*. Fresh water and in river valleys, lakes and marshes; hibernates in houses; 136, 155	Hackett & Missiroli	1935
	---; ---; 34	Kupka & Anschau	1950
	---; ---; 45	Rodhain & Van Hoof	1942
	---; ---; 84*	Galliard & Sautet	1934
	Well-watered plains, river valleys; in houses at night; 88°	Komárek & Breindl	1941
	Inland fresh water, ponds, pools, swamps, ditches, streams and streambeds, artificial containers; enters houses at dusk and night, bites man; 92°. Inland fresh water; ---; 98, 119	Peus	1942
	Canals with stagnant water, drains with or without vegetation; ---; 109	Callot & Dao Van Ty	1945
	Ponds; ---; 109	Roubaud & Treillard	1941

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES maculipennis</i> var. <i>messeae</i> (Falleroni) (cont.)	Fresh water swamps, meadows; in houses, 119. ---; in houses; 155. Meadows; ---; 244. Fresh water from subterranean springs, fresh water in meadows; in houses, suspect ^l vector of malaria; 255. Fresh water swamps; ---; 300 ---; bites during morning hours, bites in summer; 119° ---; in and outside city; 119 Fresh ponds and ditches; enters houses; 125 ---; naturally infected with malaria; 125 Near fresh water; houses and stables; 140 Cool, fresh standing bodies of water; ---; 301 ---; in houses, bites readily, July-Oct.; 333° ^a	Martini Martini & Teubner Heinz Swellengrebel Barber & Rice Lörincz Anonymous Kostitch	1934 1933 1949 1932 1935 1937 19441 1937
<i>maculipennis pergesae</i> Missiroli	Standing or slow flowing, sunny or shaded, vegetated, fresh or brackish, clear water in ponds, pools, swamps, ditches, streams, stream-beds, cisterns, artificial containers; in houses at dusk and at night; 278°	Peus	1942
<i>maculipennis</i> form <i>sacharovi</i>	Coastal plains, ricefields; middle of summer; 6. ---; ---; 155, 341 (All types of coastal breeding places, not limited to brackish waters)	Bates & Hackett	1938
<i>maculipennis</i> var. <i>sacharovi</i> Favre	---; June-Oct.; 6 ---; May; 6* ---; ---; 58 ---; ---; 84, 87, 255 Stagnant waters; ---; 125 ---; plains; 125 Shaded reservoirs, mountain streams; ---; 140 ---; ---; 269	Pettazzi Coluzzi Dryenski Senevet & Andarelli Cardamatis Foy et al. Monchadskii Shtakelberg	1941 1941 1939 1956 1931 1948 1936 1937
<i>maculipennis subalpinus</i> Hackett & Lewis	Streams, pools, fresh water swamps, brackish swamps; ---; 6 Large marshes, lakes and ponds; ---; 6	Lewis Anonymous	1939 1944 ?

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES</i>			
<i>maculipennis</i> <i>subalpinus</i> Hackett & Lewis (cont.)	Drainage canal in disuse without vertical vegetation, rich in phytoplankton; ---; 109. ---; ---; 155	Rioux & Ruffie	1957
	Seashores, semi-permanent pools, flooded rushes; ---; 109	Rioux	1958
	---; ---; 295	Shtakelberg	1937
	---; ---; 333	Lepes & Vitanovic	1962
<i>maculipennis</i> form <i>subalpinus</i>	---; ---; 6	Bates & Hackett	1938
<i>maculipennis</i> race <i>subalpinus</i> Hackett & Lewis	Lakes, coastal areas, river marshes; ---; 6, 333	Tischler	1950
<i>maculipennis</i> var. <i>subalpinus</i> Hackett & Lewis	Fresh water marshes, ditches, on open sheets of water; abundant in summer; 6. ---; ---; 155, 333	Hackett & Lewis	1935
	Shaded cool, fresh and saline water, swamps formed by spring and underground water, among vegetation, riverbanks, irrigation and drainage ditches and brick pits; prefers the darkest and dampest places in shelters; 125	Livadas & Sphangos	1941
<i>maculipennis</i> <i>typicus</i> Hackett & Missiroli	Streams, ditches, pools, brackish and fresh water swamps, lake marshes, in shallow water with vegetation; ---; 6	Lewis	1939
	---; ---; 34	Kupka & Anschauf	1950
	Spring and streams, muddy river, ditches containing seepage water with algae, in hills or plains; in houses, all year, more common in late autumn and winter; 125°	Rice & Barber	1937
	Streams with moderate vegetation, fresh and saline water, swamps, riverbanks, irrigation and drainage ditches, torrents, shallow storage reservoirs; ---; 125	Livadas & Sphangos	1941
	---; naturally infected with malaria; 125	Barber & Rice	1935
	Near fresh water; houses and stables; 140	Lörincz	1937

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES marteri</i> Senevet & Prunelle	Shaded pools in mountain streams, low temperature and clear, fresh water at 500-600 meters elevation; July-Sept.; 6. Pools in heavily shaded mountain streams; ---; 125 ---; ---; 6, 58, 84, 125 (Clear cold water of heavily shaded mountain streams, in pools under waterfalls and under overhanging rock) Hill streams; ---; 58 ---; ---; 58, 84. ---; July-Oct, peak A.; 125 (Cold, clear water of mountain streams, it prefers running water, near waterfalls and under overhanging rocks, deeply shaded places and rarely in water exposed to sun) Mountain streams with cold, clear, shaded water, stream pools with standing water, under overhanging rocks; ---; 84, 269 Sand on edge of stream; ---; 84 ---; forest, bite only under exceptional circumstances; 84° ---; ---; 87, 295. Mountain streams, flowing or interrupted, cool and relatively well shaded, rivulets, springs, tanks and water holes, rarely in swampy places and ground pools, very shallow collections of water, waters with and without vegetations; grottos, tree hole, abandoned mine shaft, above 1,000 meter altitude; 269 Torrent beds, small waterfalls, cool shaded water, and rarely in stagnant water; ---; 125 Small mountain stream, marshy area; ---; 125 ---; rare; 125 Mountain streams; ---; 295 ---; ---; 333 ---; Oct.; 357	Bates Boyd Macan Hadjinicolaou Peus Sicart & Ruffie Anonymous Logan et al. Livadas & Sphangos Shannon Pandazis Clavero Anonymous Senevet	1941 1949 1942 1938 1942 1960 1944 p 1953 1941 1933 1935 1950 1944 n 1936
<i>marteri</i> <i>conquensis</i> Torres Canamares	Clear, nearly still mountain water in shade; pig sty, shaded crevices, mountain, seldom in houses, June-Dec.; 295	Torres Canamares	1946

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES</i> <i>marteri</i> <i>sogdianus</i> Keshishian	---; ---; 125, 269	Stone et al.	1959
<i>mauritanus</i> Grandpre	---; ---; 343	Edwards	1921
<i>melanoon</i> <i>melanoon</i> Hackett	Algal mats of tiny sunlit streams along coast; ---; Logan 84. Ricefields and marshy areas; ---; 155. Ground pools, streams and waterholes, in sun and shade; March, July-Sept.; 269. ---; ---; 301	Logan et al.	1953
	---; ---; 84 (Fresh water, ground pools, streams and Aitken water holes, sunny exposure in spring, shady in summer)		1954
	Ricefields, marshes; bites occasionally; 155°	Anonymous	1945b
	---; ---; 246, 295	Foote	1954
	---; ---; 333	Anonymous	1944n
<i>melanoon</i> <i>subalpinus</i> Hackett & Lewis	Common only in the vicinity of large marshes and lakes; ---; 6	Bates	1941
	---; ---; 6, 155, 295, 341 (Large bodies of water, marshes, lake regions, rarely bites man)	Boyd	1949
	---; ---; 6*	Putnam & Hackett	1947
	---; ---; 109	Weyer	1957
	Mountains, fresh water swamps; ---; 155. Sunny, clear, fresh, standing or slow-flowing water with floating vegetation in small water collections and artificial containers in mountains; in houses and stables; 295°	Peus	1942
	Lakes and large marshes at high elevations; ---; 155	Anonymous	1945b
	---; ---; 246	Foote	1954
	---; rare; 333	Anonymous	1944n
<i>messeae</i> Falleroni	Highland lakes, 700-800 meters elevation; ---; 6	Bates	1941
	Fresh water; ---; 6	Bates	1940
	---; ---; 6, 98, 136. ---; central mountain ranges; Boyd 341 (Inland river valleys and large marshes, rarely bites man)	Boyd	1949

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES messeae</i> Falleroni (cont.)	---; ---; 6*	Putnam & Hackett	1947
	Reed-covered shores of fresh water lakes, overgrown banks of larger rivers, pools of standing water; bites indoors at night; 34*	Anonymous	1944 k
	---; very rare; 45	Anonymous	1944 c
	Marshes and border zones of island seas where reed are abundant; ---; 58*. Lakes, in stagnant or slowly flowing water; ---; 155	Anonymous	1944 j
	---; ---; 84, 255, 357 (Fresh water, inland-lake and marsh)	Anonymous	1944 p
	---; ---; 88*. ---; probable vector of malaria; 255°, 333°	Anonymous	1944 o
	---; ---; 92	Anonymous	1944 g
	---; ---; 109	Sargent	1938
	River bays, ditches, boggy meadows, reedy river edges; ---; 119*	Baer	1960
	Large moist plains, lakes, ponds, bogs, swamps, river valleys; ---; 119	Anonymous	1944 a
	---; near salty places, tree hollow, Feb.-Nov.; 119	Weyer	1959
	Fresh waters only; hibernate in cold church towers, tool sheds, lofts, cellars and other unoccupied buildings; 124	Anonymous	1949
	---; may transmit malaria, May-Sept.; 124°	Anonymous	1959
	Swamps or sluggish waters; ---; 125	Anonymous	1944
	---; naturally infected with malaria; 136	Anonymous	1944 d
	Lakes, marshes, inland river valleys, artificial lakes, lowlands with small natural pits and excavations with pools of rainwater, pools which collect in peat cuttings and other man-made excavations; hibernate in barns and houses during spring and summer; 140*	Anonymous	1945
	Fresh water of inland ponds and streams; ---; 152	Anonymous	1946

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES messeae</i> Fallereni (cont.)	Cool, fresh, standing water, river valleys, marshes, Anonymous lakes; suspected of transmitting a mild form of <i>Plasmodium vivax</i> ; 155. ---; ---; 269 ---; ---; 155, 228, 300 (Cool, fresh standing bodies of water in large inland river valley, Russell et al. 1943 lakes and marshes, hibernate in houses, possible vector of malaria) ---; rare; 228 Cool, fresh standing water, swamps, large inland river valleys, ponds, lakes, marshes; ---; 244*. ---; coastal areas; 358 Bodies of stagnant water, valleys of large rivers; flat lowlands; 255* Inland fresh water; ---; 255 Ricefields; ---; 295 Swamps; ---; 333	Anonymous Russell et al. Anonymous Anonymous	1945b 1943 1944 b 1945 a 1944 f
<i>minimus</i> Theobald	---; ---; 193	Manson & Ramsay	1933
<i>multicolor</i> Cambouliu	---; ---; 6	De Meillon	1947
	Standing or slow-flowing water with or without vegetation in small open pools, irrigation ditches and shallow wells; enters houses at night, bites readily, all year, especially June-Aug.; 87°	Peus	1942
	Brackish water; ---; 87	Barber	1936
	---; ---; 246	Foote	1954
	Slow water, sunny, vegetated and very saline; ---; 295	Dominguez & Dominguez	1948
	Saline oasis; responsible for intense malaria in neighborhood of oasis, 343	Macan	1942
<i>nigripes</i> Staeger	Treeholes; forest; 34°	Kupka & Anschau	1950
	Flood and swamp areas along rivers, pools and ponds made with tiles; ---; 34	Wenger	1947

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES nigripes</i> Staeger (cont.)	---; ---; 92, 98, 109, 119, 155, 301, 333 (Bites man, vector of tertian malaria)	Martini	1930
	Water in peat cuttings; ---; 98, 331	Blacklock & Carter	1920 b
	Shady, humid forests; active in the evening, July-Sept.; 109	Cordier	1918
	Treeholes, marshy ground; ---; 109	Blanchard	1918
	---; enters houses; 109°	Langeron	1918 a
	Treeholes, artificial containers, abandoned wells; forest edges, suspected transmitter of malaria, experimentally infected with <i>Plasmodium</i> ; 119°	Baer	1960
	Treeholes; Oct.; 119. ---; at 900 m. altitude; 301	Eckstein	1922
	Small ponds; near trees, Mar.-Sept.; 119	Prell	1919
	---; near coast; 119	Hesse	1918
	---; ---; 140	Schneider	1914
	---; ---; 244, 300	Martini	1928
	Treeholes with damp humus; bite during day, May-July; 301°	Galli-Valerio & Rochaz de Jongh	1913
	---; can transmit malaria, experimentally infected with <i>Plasmodium vivax</i> ; 301	Galli-Valerio	1921
	---; Sept. and Oct.; 301	Galli-Valerio	1916
	---; April; 301	Galli-Valerio	1917
	Tree hole; ---; 333	Martini	1921
	---; possible vector of malaria; 333	Anonymous	1944 n
	---; ---; 333°	Apflebeck	1928
<i>palestinensis</i> Theobald	---; ---; 6	De Goyon	1919
	Standing or slow moving water with sandy or rubble bottom; ---; 58	Konsuloff	1921
	Temporary pools, clear hill streams; enters houses, Aug.-Oct.; 125	Waterston	1918
	Rain tanks, running or still water pools; ---; 125	Doflein	1918

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES palestinensis</i> Theobald (cont.)	Margins of still bays of fast-flowing waters, puddles, creeks, by stones, in algae; overwinter, June and July; 333	Martini	1921
<i>pictus</i> Löw	---; ---; 295	Kuntze	1921
<i>plumbeus</i> Stephens	Treeholes; ---; 6 ---; April-Sept.; 6	Bates	1941
	Treeholes in forest areas; experimentally infected with <i>Plasmodium vivax</i> , persistent biter especially in shade areas; 34°	Anonymous	1944 k
	Treeholes; ---; 58, 109, 255, 278	Peus	1942
	---; forest, bite only under exceptional circumstances; 84°	Anonymous	1944 p
	---; ---; 84 (Treeholes, artificial containers, rock or ground depressions with rich infusion of fallen leaves)	Aitken	1954
	Rot holes of trees, shady puddles in wooded areas; experimentally infected with malaria; 88	Anonymous	1944 o
	Treeholes; forests, active in evening, July and Aug.; 92°	Wesenberg-Lund	1921
	Reservoirs; ---; 92	Shtakelberg	1937
	Treeholes; experimentally infected with malaria, bites day and night in houses, common and widely distributed; 98°, 331°	Lang	1920
	Peat cuttings with water; natural carrier of malaria; 98	Blacklock & Carter	1920 b
	Treeholes, waterbutts or tanks, rain barrels; arboreal, all year; 98, 152, 272, 331 (Experimental carrier of benign tertian malaria)	Marshall	1938
	---; abundant in damp, marshy areas; 98. Weedy pools; ---; 272	Lang	1918
	---; bites infrequently; 109°	Callot & Dao Van Ty	1945
	---; experimentally infected with <i>Plasmodium vivax</i> and <i>P. falciparum</i> ; 98	Senevet & Andarelli	1956

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES plumbeus</i> Stephens (cont.)	---; forests, May-Sept.; 109	Seguy	1925c
	---; experimentally infected with West Nile fever; 109	Vermeil et al.	1960
	Treeholes; bites by day, June-July, Sept.-Nov.; 119°	Vogel	1929a
	---; edge of forest, Aug.; 119	Vogel	1933
	---; damp river valleys; 119	Weyer	1959
	Common in wooded areas, treeholes, waterbutts or tanks; occasionally enters houses, experimentally infected with benign tertian malaria, all year, active April-Oct.; 124	Edwards et al.	1939
	Treeholes, water butts, cisterns; bite painful, day and night, in and outdoors; 124°	Anonymous	1949f
	Treeholes with rotting vegetation; ---; 125	Stephanides	1938
	---; forests; 125°	Pardazis	1935
	Concrete troughs in basements; indoor lavatories, urban; 136	Swellengrebel	1954
	Concealed places, artificial containers, treeholes; ---; 140	Shtakelberg	1925
	Peat cuttings; ---; 152	Anonymous	1946
	---; ---; 152 (Clear water in cave pool, shaded ground pool)	Boyd	1949
	Treeholes; Oct.-Dec.; 153	Blacklock & Carter	1921
	Rot holes of trees and other accumulations of water, old infiltration galleries; bites in the open, experimentally infected with <i>Plasmodium vivax</i> and <i>P. falciparum</i> ; 155°	Anonymous	1945b
	Shaded cavities of rocks with clean water; ---; 155	Missiroli	1935
	Treeholes; bites by day or at dusk, enters houses, June; 246°	Braga	1931

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>Anopheles plumbeus</i> Stephens (cont.)	---; ---; 246 Trees with rotholes, tanks, springs, streams, ground pools; grottoes, wells, a <i>nuraghe</i> , Feb.-Dec., peak March, June and July; 269	Foote Logan et al.	1954 1953
	---; readily bites in and out of doors; 272°	Ashworth	1927
	Treeholes; ---; 295	Gil Collado	1930
	---; ---; 300	Anonymous	1944h
	Treeholes; ---; 301°	Bangerter	1926
	---; ---; 301	Anonymous	1944i
	Treeholes; in grottos, June; 333	Tischler	1950
<i>plumbeus</i> var. <i>corsicanus</i> Edwards	Treeholes; ---; 84 ---; in tent; 84	Peus Edwards	1942 1928
<i>pseudopictus</i> Grassi	---; ---; 6 Mineral springs; enters houses, May-Nov.; 125*	Fiorito Pandazis	1917 1935
	---; . . , 155*	Blacklock & Carter	1920a
	Ricefields and on the coast; ---; 295	Pittaluga	1929
<i>punctipennis</i> (Say)	---; experimentally infected with malaria; 98°	Blacklock & Carter	1920a
<i>sacharovi</i> Favre	Marsches, occasionally in pools and ditches with salt water, coastal plain at 200 meters elevation; hibernate inland; 6	Bates	1941
	Swamps and lagoons in coastal areas with warm, brackish or saline water; enters houses at dusk, bites readily; 6*, 58*, 155*, 255*	Peus	1942
	---; April-Sept.; 6	Bates	1937
	---; ---; 34, 87	Stone et al.	1959
	Small temporary collection of water with vegetation, Anonymous slow-moving water; enters houses; 58		1944j
	Brackish water, salt water; enter houses, coastal area, possible vector of malaria; 84°	Anonymous	1944p

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES sacharovi</i> Favre (cont.)	Marshes; ---; 84	Edwards	1928
	---; crevices in tree bark and between roots of trees, bites in open, Sept.; 84	Sautet	1937
	---; common in eastern plain, bites only outside; 84*	Sautet & Marneffe	1943
	Fresh or brackish water, sluggish water in plains; ---; 87	Aziz	1934
	Marshes; ---; 87*	Stratman et al.	1937
	Marshy areas, temporary pools with vegetation; rare; 88*	Anonymous	1944 o
	Coastal swamps, warmer waters of plains; in bedrooms at night, in warm rooms, anthropophilic, March-Oct.; 125*	Weidner	1950
	Bodies of standing water in plains areas; abundant in late summer; 125	Foy et al.	1948
	Salt marshes and other saline collections near seacoast; ---; 125	Anonymous	1944
	---; dangerous carrier of malaria, June-July; 125	Anonymous	1944 1
	---; ---; 140	Martini	1928
	Waters with algae or vegetation; ---; 155	Beadle	1947
	---; carrier of malaria; 155, 357*. Small areas with less vegetation, ponds and ditches; ---; 343	Smart	1943
	---; ---; 269, 341* (Coastal and inland marshes, fresh and brackish water, sunlit, enter dwellings, persistently bite in bedrooms)	Russell et al.	1943
	Brackish swamps and marshes; in houses, common in hill and mountain districts up to 3,000 feet elevation; 333*	Anonymous	1944 n
	Saline waters; April, June-July; 333	Lepes & Vitanovic	1962
	Brackish marshes; ---; 343 (Chief vector of malaria in areas where it is common)	Boyd	1949

TABLE I - MOSQUITOES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>Anopheles</i> <i>farautii</i> (Theobald)	Fresh water; ---; 6 ---; ---; 58 ---; ---; 246, 295	Bates Markoff & Moroff Foote	1940 1929 1954
<i>sinensis</i> Wiedemann	---; ---; 58, 255 ---; at sunset, in reeds. Aug.; 109	Martini Seguy	1928 1925c
	Lake and pond margins; abundant in evening, Oct.-Nov.; 125	Waterston	1918
	---; ---; 155, 295, 341 ---; ---; 333	Martini Mühlens & Sfarcic	1930 1925
<i>sinensis</i> <i>pseudopictus</i> Grassi	---; July-Aug.; 255*	Pielsticker	1917
	---; ---; 333	Martini	1921
<i>superpictus</i> Grassi	Spring-fed pools in coastal plain, small pools in gravelly riverbeds and ricefields; suspected vector of malaria, Sept.; 6 Mountain streams, brooks, ponds, swamps and rock pools; common Nov.-Dec.; 6*	Bates Anonymous	1941 1944e
	---; in houses; 6	Covell	1944
	---; all year, peak June-July and Sept.; 6	Putnam & Hackett	1947
	---; peak Aug.; 6	Bates	1937
	Shady or sunny, shallow, running water in rocky river or streambeds, with or without vegetation; in houses at dusk and night, vicious biter; 58°, 87°*, 246°, 255°*, 278°*, 333°*. Running water in rocky river or streambeds; in houses at dusk and night; 125. Shady or sunny, shallow running water in rocky river or streambeds with or without vegetation; in houses; 155°*	Peus	1942
	Sunny or slightly shaded pools, streambeds, in rivers, irrigation system, ricefields and clean slow-flowing brooks with sandy banks; July-Aug.; 58*. ---; abundant and with a relatively high sporozoite index; 125	Anonymous	1944j

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES superpictus</i> Grassi (cont.)	Warm swamps with algae; ---; 58 River; in houses, east coast; 84 Fresh water; in houses, naturally infected with malaria; 87 Mountain streams, rivers; altitudes of more than 4000 feet, March; 87 Sunny streams, brackish water; ---; 87 ---; ---; 87, 125, 155 (In fast flowing small drain with saline water, streams and stagnant water, readily enters houses, carrier of malaria, Aug. and Sept.) Brooks, streambeds, mountain and hills, flatlands, water in shoals and gutters, water running over stones and gravel, shade of stones in streams, quiet inlets, on spirogyra; bedrooms, stables; 125 Torrents, swamps, marshes and ditches, streambeds and banks with vegetation, irrigated ricefields, borrow pits; in houses by day, active in the evening until dawn, attracted to lights, naturally and experimentally infected with malaria, common May-Oct.; 125*	Silwensky Aitken Barber Stratman et al. Aziz Kirkpatrick Weidner Livadas & Sphangos Anonymous Barber & Rice Pandazis Seguy Anonymous Alessandrini Grassi Hargreaves	1927 1954 1936 1937 1934 1925 1950 1941 1944 1 1935 1935 1924 1945 b 1925 1925 1923

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANOPHELES superpictus</i> Grassi (cont.)	---; ---; 228	Martini	1934
	---; ---; 246	Foote	1954
	Fast, rocky streams with attached algae; ---; 295	Gil Collado	1937
	Hill streams; ---; 295*, 343*	Macan	1942
	---; ---; 295. Seepage and pools in gravel riverbeds; ---; 341* (Hibernate in stables and houses)	Boyd	1949
	Sunny creeks and still waters with algae, mountain streams; in houses and stables; 333	Tischier	1950
	Fresh water pools and streams; April-Sept., peak Aug.; 333*	Anonymous	1944 n
	---; Oct.; 333°	Kostitch	1937
	Rivers and streams; carrier of malaria; 341	Smart	1943
	Running hill streams in the open sun; ---; 341	Hackett	1937
	Mountain streams; ---; 357	Edwards	1921
	---; naturally infected with malaria oocysts; 357	Brumpt	1938
	---; ---; 357 (Pools, small streambeds, rivers, irrigations with flowing water in hills and mountains, readily enter house, tents and barracks, prefer humans, considered to be a vector of malaria)	Russell et al.	1943
<i>superpictus</i> var. <i>macedoniensis</i> Cot & Hovasse	---; ---; 357	Cot & Hovasse	1917
<i>superpictus</i> var. <i>vassilievi</i> Portchinsky	---; ---; 357	Edwards	1926
<i>turkhudi</i> Liston	---; ---; 87	Langeron	1918
	Pools in streambeds; ---; 155, 295	Boyd	1949
	---; ---; 343	De Meillon	1947
<i>typicus</i> Missiroli & Hackett	---; ---; 108, 228, 246, 295, 300, 341. Artificial containers; inland salt areas, stables, suitable as transmitter of malaria; 119	Baer	1960
<i>umbrosus</i> (Theobald)	Stagnant water, ditches and pools, exposed to sun-light or in shade; ---; 193	Manson & Rossay	1933
<i>vagus</i> Donitz	Brackish water; cottages; 125	Cardamatis	1931

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>BANCROFTIA</i> <i>albionensis</i> MacGregor	---; ---; 98, 109	Martini	1928
<i>BARRAUDIUS</i> <i>modestus</i> Ficalbi	Mashes among dense tangles of reeds; enters houses, Aug.-Dec., especially Sept.-Nov.; 255°	Zotta	1932
<i>COELODIAZESIS</i> <i>plumbea</i>	Treeholes; ---; 109 Woods; ---; 119	Seguy Eckstein	1920 1920a
<i>CULEX</i> <i>albopunctatus</i> Rondani	---; May, Aug.; 109	Peju	1920
<i>alpinus</i> Linnaeus	---; ---; 355	Marshall	1938
<i>annulatus</i> Schrank	---; windows; 88 Muddy water, with decaying wood in bottom, sewage; ---; 109 ---; ---; 125 Lakes; common and annoying, Aug.; 136° ---; common June-Aug., peak July; 228	Landrock Boremann Cardamatis Anonymous Anonymous	1908 1918 1931 1944a 1944b
<i>annulipes</i> Theobald	Ditches with grasses; ---; 88 Lakes; common Aug.; 136° ---; ---; 300°	Landrock Anonymous Anonymous	1908 1944d 1944h
<i>apicalis</i> Adams	---; June-Aug.; 6 ---; ---; 34, 92, 108, 140, 301. Partly shaded pool, swamp pool with <i>Sphagnum</i> in woodland, edge of swamp pool in open-land, rock pools, near sea-shore, exposed to direct sunlight; May-Aug.; 228 Temporary pools around houses and streambeds; ---; 84 ---; ---; 88 Puddles, ditches, pond margins, wells, rainwater butts and other artificial containers; ---; 98, 272 ---; June and Aug.; 98. ---; May and Sept.; 272	Natvig Galliard Anonymous Edwards et al. Marshall	1948 1927 1944o 1939 1938

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX apicalis</i> Adams (cont.)	Shaded areas, grassy marshes, drainage canals; ---; 109	Callot	1947
	---; ---; 109°	Callot & Dao Van Ty	1945
	Artificial containers, canals, shady forest pools with vegetation, lakes with streamlets, l. margins and ditches with much vegetation, unclean spring-swamp, peat pool; April-Oct.; 119	Vogel	1929a
	---; ---; 124	Harvey & Hill	1947
	Pools and ditches with vegetation, sometimes in slightly brackish water; all year; 125	Stephanides	1937
	Light, vegetated areas in reservoirs; ---; 155	Monchadskii	1936
	Shaded spring water, reservoirs; ---; 155	Shtakelberg	1937
	---; ---; 244	Anonymous	1945 a
	Ditches, pools with fresh and clear water, with vegetation; forest; 246	Cambournac	1944
	---; forests and fields, around towns, hibernate as adult, April-Oct.; 246	Braga	1931
	---; Sept.-Nov.; 255	Zotta	1932
	Heavily shaded, unused drainage ditches; ---; 295	Gil Collado	1937
	Stagnant water; ---; 295	Galliard	1928
	---; ---; 333	Anonymous	1944 n
<i>apicalis</i> var. <i>judaicus</i> Edwards	Ditches, spring, shady and herbaceous waterholes, edge of ponds, forests and bushes; ---; 119. Springs; ---; 300	Martini	1931
<i>utogenicus</i> Roubaud	Flood plains of the Rhine; ---; 109	Callot & Vermeil	1948
<i>brunetti</i> Galliard	Rivers; ---; 84. ---; ---; 269 (Pools in river beds)	Aitken	1954
<i>cantans</i> Meigen	Lakes; common and annoying, Aug.; 136°	Anonymous	1944 d
	---; common June-Aug., peak July; 228	Anonymous	1944 b
	Puddles; April; 301°	Galli-Valerio & Rochaz de Jongh	1914

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX ciliaris</i> Linnaeus	---; ---; 34, 98, 119, 136. ---; Aug.-Sept.; 92 ---; common June-Aug., peak July; 228	Wesenberg-Lund Anonymous	1921 1944 b
<i>dorsalis</i> Meigen	Flood areas, meadows; ---; 119 Lakes; common and annoying, Aug.; 136°	Martini Anonymous	1922 1944 d
<i>elegans</i> (Theobald)	---; ---; 125	Cardamatis	1931
<i>exilis</i> Dyar	Reservoirs with vegetation; ---; 119 ---; ---; 244	Monchadskii Anonymous	1936 1945 a
<i>fatigans</i> Wiedemann	---; ---; 124 Stagnant water; ---, 125	Harvey & Hill Cardamatis	1947 1931
<i>fumipennis</i> Stephens	---; ---; 109, 136, 300, 357	Martini	1922
<i>fusculus</i> Zetterstedt	---; common June-Aug., peak July; 228	Anonymous	1944 b
<i>geniculatus</i> Olivier	Basin filled with moss, lake, in rocky basin of mountain river bed; Sept., 109 Marshy depression over-run with rose bushes, slow or stagnant water; ---; 109 ---; ---; 125	Brolemann Brolemann Cardamatis	1919 1918 1931
<i>hortensis</i> Ficalbi	---; ---; 6 ---; ---; 34 ---; ---; 58 Rocky basins without vegetation, bed of a torrent in mountain region; ---; 84 Mountain and coastal region; ---; 84. ---; ---; 269 (Mountain and lowland streams, pools with clear water containing vegetation, also well shaded) Ponds with duckweeds; ---; 84, 109, 119, 343	Anonymous Kupka & Anschau Martini Callot Aitken Edwards	1944 e 1950 1928 1947 1954 1921

TABLE I - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX</i> <i>hortensis</i> Ficalb ^b (cont.)	Rock pool; ---; 84	Edwards	1928
	---; central and mountainous region; 84	Galliard	1927
	---; ---; 88	Anonymous	1944 o
	Artificial containers; bites avidly, Oct.; 109 ^c	Legendre	1924
	Reservoirs with algae; ---; 109, 119, 155	Monchadskii	1936
	Artificial pools; ---; 109	Lavier & Callot	1931
	---; in houses; 109	Villeneuve	1919
	---; ---; 109, 119 (In herbaceous, clear water, abandoned fountains, gardens, grottoes)	Martini	1931
	---; ---; 109, 155, 301, 357 (Slow-flowing clean water with grass and algae)	Martini	1920 b
	Clean cold water; June and July; 119	Vogel	1933
	Artificial pool, stream; in houses, 125 ^d	Waterston	1918
	Pool, ditches, slightly brackish water; ---; 125	Stephanides	1937
	Spring water marshes; ---; 125	Pandazis	1935
	Reservoirs and puddles of clear water covered with vegetation; wooded areas, May-Oct.; 246	Braga	1931
	---; March; 246	Cambournac	1944
	---; ---; 255	Anonymous	1944 f
	Fresh water; ---; 269	Moltoni	1927
	---; ---; 278	Seguy	1921
	Vegetated cool pools in mountain zones, rain pools; ---; 295	Gil Collado	1930
	Edges of streams with filamentous algae; ---; 295	Galliard	1928
	Fountain basin; Sept.; 301	Galli-Valerio	1921
	Ditches with vegetation and clear, flowing waters, flooded meadows, algae pools in standing and slow-flowing river branch; March; 333	Martini	1921
	Spring pools in mountain forests; July-Sept.; 333	Apfelbeck	1928

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX</i> <i>hortensis</i> Ficalbi (cont.)	Salt water; ---; 357	Joyeux	1920
<i>impudicus</i> Ficalbi	Coastal and mountain regions; ---; 84. Lowland and mountain regions; ---; 269 (Mountain and lowland streams, pools, small ponds, rock pools, fresh and stagnant water with vegetation and well shaded)	Aitken	1954
	Still waters, in gardens and ditches; ---; 84, 269, 278	Martini	1931
	Swamps, canals with vegetation; ---; 84, 269, 278, 343	Monchadskii	1936
	Shaded waters, semi-permanent pools, ricefields, large collections of water with vegetation; ---; 109	Rioux	1958
	---; ---; 155	Anonymous	1945b
	Ditches, ground pools of clear water; forest species; 246	Cambournac	1944
	Water holes with vegetation; ---; 269. Large marshes; ---; 278	Edwards	1921
	Waterholes with vegetation in garden; ---; 269	Seguy	1924
	Clear water pool; ---; 295	Torres Canamares	1945
<i>jugorum</i> Villeneuve	---; ---; 109	Brolemann	1918
<i>lateralis</i> Meigen	---; ---; 109, 155	Van Gaver & Pringault	1914
<i>laticinctus</i> Edwards	---; enters houses; 84	Galliard	1927
	Fresh water reservoirs; ---; 109, 155, 295	Monchadskii	1936
	Artificial containers; ---; 109	Shtakelberg	1937
	---; May; 109	Seguy	1921
	---; ---; 109, 155, 295 (Artificial pools, tanks or barrels in gardens, domestic, May-Dec.)	Kirkpatrick	1925
	Troughs, pools with clear water, ornamental basins; ---; 125	Stephanides	1937
	---; fields near dwellings, July, Sept.; 246	Braga	1931

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX laticinctus</i> Edwards (cont.)	---; ---; 255 ---; mostly near people; 333 ---; ---; 343	Zotta Martini Edwards	1932 1931 1921
<i>laurenti</i> Newstead	---; ---; 84	Galliard	1931
<i>lavieri</i> Larrousse	Mountain; Aug.; 109	Larrousse	1925
<i>longiareolata</i> Macquart	---; ---; 301	Anonymous	1944 i
<i>martinii</i> Medschid	---; ---; 119 ---; ---; 140 ---; ---; 155, 333	Stone Stone Stone et al.	1963 1961 1959
<i>mimeticus</i> Noe	---; ---; 6 Rivers, bridge; ---; 84. ---; June-Sept.; 269 ---; ---; 87, 357 In large open grassy pools; mountainous regions of coast, June, July; 109	Anonymous Aitken Edwards Seguy	1944 e 1954 1921 1925 c
	Mountain streams, creeks with vegetation; ---; 109, 155	Monchadskii	1936
	Rock pools; ---; 109°	Rioux	1958
	---; rarely enters houses; 109, 155	Shtakelberg	1937
	Streams, in shaded situations; ---; 125	Waterston	1918
	Slow-moving water, seepage; ---; 125	Pandazis	1935
	Stagnant water; ---; 125	Cardamatis	1931
	Cool streams without organic matter, pools of clear water; ---; 295	Gil Collado	1930
	Lagoon; ---; 295	Torres Canamares	1945
	Still place of fast flowing mountain stream, under roots and stones; ---; 333	Martini	1921

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX mimeticus</i> Noe (cont.)	Rice paddies, fresh water pools, slow-running streams, artificial containers; ---; 343	Bohart & Ingram	1946
<i>modestus</i> Ficalbi	Fresh water reservoirs with vegetation; ---; 84, 140, 155, 295	Monchadskii	1936
	---; ---; 88	Anonymous	1944 o
	---; bites viciously; 98°	Anonymous	1949
	Ricefields, slightly saline aerated water, halophilic reedbeds; bite causes a rash; 109°	Rioux	1958
	Stagnant water with vegetation, ponds, streams; bites during the day; 109	Callot & Dao Van Ty	1945
	Marshes and brackish water; ---; 109	Roman	1937
	Puddles, brackish water, rice ponds; bites savagely during day; 295°	Gil Collado	1930
	Ground pools; ---; 295, 343	Barraud	1934
	Swamps, pools; active in day in open; 125°	Pandazis	1935
	Waterbutt; ---; 125	Stephanides	1937
	---; ---; 333	Anonymous	1944 n
	---; ---; 357	Edwards	1921
<i>molestus</i> Forskål	Highly contaminated and turbid water; domestic, bite indoors by night; 98°. Cesspools and septic tanks; ---; 109°. ---; ---; 119°	Edwards et al.	1939
	Stagnant waters, in cesspools, ---; 98. ---; ---; 119	Marshall	1942
	Underground water; ---; 98	Anonymous	1959
	---; ---; 109, 125, 140, 193	Marshall	1938
	---; ---; 124	Anonymous	1946
	In well near seashore, hole filled with rainwater; ---; 155	Braga	1958
<i>morsitans</i> Theobald	---; common; 119	Martini	1922

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX</i> <i>nemorosus</i> Meigen	---; ---; 119	Ullrich	1939
	---; ---; 125	Cardamatis	1931
	---; ---; 136	Anonymous	1944 d
	---; ---; 155	Anonymous	1945 b
	---; common June-Aug., peak July; 228	Anonymous	1944 b
	---; severe pest; 300°	Anonymous	1944 h
	Ditches under ice in winter, middle of reeds on plains, stagnant water between roots of trees on edge of river; Nov.; 301	Galli-Valerio	1934
	Puddles, footprints of cows, in liquid manure; 2000 m. altitude, bite in sunlight, even at light altitude; 301°	Galli-Valerio & Rochaz de Jongh	1913
	Woods, pools, ditches; ---; 301	Galli-Valerio & Rochaz de Jongh	1915
	---; in houses, Jan., April; 301	Galli-Valerio & Rochaz de Jongh	1914
	---; May-Oct.; 301	Galli-Valerio	1917
<i>nigripes</i> Zetterstedt	---; ---; 108	Dyar & Knab	1917
	---; severe pest; 300°	Anonymous	1944 h
<i>nigritulus</i> Theobald	Margin of small shallow pond covered with vegetation; Aug.; 92	Wesenberg- Lund	1921
<i>ormatus</i> Meigen	Tree holes; ---; 109	Brolemann	1918
	Tree holes, woods; April, May and July; 301	Galli-Valerio	1917
	---; bites in forest at dusk, 301°	Galli-Valerio	1921
	---; Sept., Oct., 301	Galli-Valerio	1916
	---; ---; 333°	Apfelbeck	1928
<i>penicillaris</i> Rondani	---; Sept.; 155*	Grassi	1924

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHC	DATE
<i>CULEX perezi</i> Theobald	---; ---; 84	Galliard	1927
	---; ---; 295 (Borrow pits or pools, stagnant or drain, usually weedy, canals, ricefields, artificial containers, enter houses and bite by night, all year, peak Sept.-Nov.)	Kirkpatrick	1925
	---; ---; 343	Edwards	1921
<i>pipiens</i> Linnaeus	---; May-Aug.; 6	Marcuzzi	1943
	Artificial water containers, gutters and ditches, cesspools; nocturnal and domestic, hibernates in houses, May; 34°	Anonymous	1944k
	Stagnant and saline water; active all year; 45	Goetghebuer	1925
	---; ---; 58, 108, 140, 300	Martini	1928
	Pools, around streams, in fresh and brackish waters; in houses; 84	Galliard	1927
	---; widespread and common; 84. ---; widespread and common, close to and distant from human habitations; 269 (Most types of aquatic situations, fresh and foul water)	Aitken	1954
	---; annoying during the night; 88°	Anonymous	1944 o
	---; ---; 88	Landrock	1908
	---; in summer houses, bites in winter; 92°. ---; July-Oct.; 108°. ---; ---; 193. Ditches, pools, swamp pools, clear water, ponds covered with <i>Lemna</i> , polluted water; seashore and up to 250 m. above sea level, cellar of houses, bites in winter; 228°. ---; July-Oct.; 300°	Natvig	1948
	Cisterns, water barrels, dunghill pools, clear and grassy ponds; domestic, hibernate in dark moist cellars, May-Nov.; 92	Wesenberg-Lund	1921
	---; Oct.; 92	Nielson & Greve	1950
	---; common; 92	Anonymous	1944 g
	Troughs, barrels, artificial containers; in houses, cellars and stables; 98	MacGregor	1921
	Ornamental ponds, woodland pools and water storage tanks; overwinter in houses; 98°	Wilson	1946

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX pipiens</i> Linnaeus (cont.)	Waterbutts, foul habitats; aestivate, midsummer to autumn; 98	Macan	1939
	Natural pond with grassy edges and ditches; ---; 98	Jarvis	1919
	---; Sept.-Apr.; 98	Buxton	1935
	---; Aug.; 98	James	1922
	Manure ditches, standing waters, clean forest pools, hollows in tree roots and treeholes, artificial containers; overwinters in cellars, protected and warm places; 109	Eckstein	1918
	Marshy depressions, overrun with rose bushes, temporary and permanent pools; in houses; 109	Brolemann	1918
	Artificial containers; bites avidly; 109°	Legendre	1924
	Water with fermented vegetable matter, in polluted water, urban areas, cess pools; ---; 109	Roubaud & Gaschen	1932
	Salt water, salt marshes with algae; ---; 109	Callot	1947
	Lavatories, pools with manure; ---; 109	Legendre	1935
	Brackish water; ---; 109	Roman	1937
	Rivers; ---; 109	Peju	1920
	---; Dec.-Feb.,; 109	Legendre	1933
	---; March-Nov., 109	Eckstein	1919 a
	---; common; 109	Seguy	1921
	Unclean, sunny waterholes in rocky streambed, unclean ditch with vegetation, street ditch; in house, outhouse, April, May; 119°	Vogel	1933
	Dirty ponds; overwinters in cellars, Aug.; 119	Martini	1931
	Rain barrels, ditches; forests; 119	Martini	1923
	Artificial containers; ---; 119	Peus	1934
	---; damp and warm cellars in houses, prefers children to adults; 119°	Martini	1924
	---; fields, meadows, villages and towns, June-July; 119	Schneider	1914

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX pipiens</i> Linnaeus (cont.)	Water butts, garden tanks, wells, puddles, ditches, pond-margins, rarely in treeholes, in clean and very foul water, fresh and saline waters; domestic, hibernate in cool, damp enclosures, all year; 124	Marshall	1938
	Stagnant waters, waters contaminated with manure, sewage or putrifying organic matter, shallow wells, roof gutters, cisterns, catch-pits of street gutters; in houses, abundant; 124	Anonymous	1949
	Puddles, ditches, pond margins, wells; rarely bites mar., Sept.; 124°	Edwards et al.	1939
	Any collection of water, ponds; ---; 124. Collection of water in disused sawpit; ---; 272. Artificial washing pond amid soap suds and extremely foul-smelling, but quite clear, rocky pools of sewage effluent; ---; 357	Lang	1920
	Clean and foul water, pools in hill streams, lake margins, horse troughs, hoofmarks, with algae, low marshy ground and artificial containers; Sept.-Dec.; 125	Waterston	1918
	Standing water; in houses, bites at night; 125°	Stephanides	1937
	Streams of grassy, clear water, stagnant pools; ---; 125	Joyeux	1918
	---; June, Aug.; 125	Joyeux	1920
	Lakes; common, Aug.; 136°	Anonymous	1944 d
	---; ---; 136	Bos	1934
	Bog meadows; in houses, in autumn; 152	Wilson	1937
	---; in houses; 153	Blacklock & Carter	1921
	Artificial containers, rubbish piles, drains, gutters, cesspools; bites at night; 155°	Anonymous	1945 b
	Almost any kind of water except sea water; ---; 155	Hargreaves	1923
	---; naturally infected and experimental transmission of <i>Trypanosoma</i> ; 155	Laveran & Franchini	1920
	---; common June-Aug., peak July; 228	Anonymous	1944 b
	Obiquitous; ---; 244	Blank-Weissberg	1928

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX</i> <i>pipiens</i> Linnaeus (cont.)	Clear or dirty, temporary or permanent water near dwellings; nocturnal, domestic, common, early spring to first frost, often hibernate in houses; 246	Braga	1931
	Puddles, collections of water with organic matter, artificial containers, rarely in treeholes; in houses, June; 246	Cambournac	1944
	---; all year; 255	Zotta	1932
	Wells, cisterns, domestic containers; ---; 295	Gil Collado	1937
	Stagnant pools in streambeds; ---; 295	Galliard	1928
	Irrigation zone along coast; ---; 295	Amelivia	1930
	Pits, ricefields; ---; 295°	Pittaluga	1932
	Gully of house connected with rain and discharge pipe of pissoir; May-Oct.; 301	Galli-Valerio	1916
	Puddles, rainbarrels, near dwellings; bite in swarms; 301°	Galli-Valerio	1925
	Puddles, small canals with much vegetation; Nov.; 301	Galli-Valerio	1926
	---; in houses; 301	Galli-Valerio & Rochaz de Jongh	1914
	Any type of water, natural or domestic, in streams, ponds, pools in marshes, hoofmarks, also in foul situations; hibernates in houses in dark, cool cellars and lofts, rarely bite man; 331°	Wright	1923
	Dirty ditches, water barrels, fairly deep springs; ---; 333	Martini	1921
	---; ---; 343	Edwards	1921
<i>pipiens</i> <i>autogenicus</i> Roubaud	Collection of water in cellars, septic tanks, sewers; cities, in houses more rarely in summer than winter, active all year, bites more readily in dark than light; 109°	Roubaud & Colas Belcour	1933
	Water rich in organic content; ---; 155	Mosna	1947
<i>pipiens</i> <i>berbericus</i> Roubaud	---; ---; 109°	Roubaud	1945

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX</i>			
<i>pipiens</i> <i>calloti</i> Rioux & Pech	---; ---; 109	Stone	1963
<i>pipiens</i> var. <i>doliorum</i> Edwards	Water barrels; ---; 98	Lang	1920
<i>pipiens</i> <i>molestus</i> Forskål	---; ---; 92, 109, 119, 125, 136, 140, 193, 228, 300	Natvig	1948
	Excavations; ---; 98	Shute	1941
<i>pipiens</i> <i>pipiens</i> Linnaeus	---; ---; 355	Stone	1965
<i>prosecutor</i> Séguy	---; ---; 109	Stone et al.	1959
<i>pseudomimeticus</i> Séguy	---; ---; 109	Séguy	1925b
<i>pyrenaicus</i> Brolemann	---; common; 45	Anonymous	1944c
	---; ---; 84	Séguy	1932
	Grassy ponds; May-Nov.; 109	Séguy	1921
	Ditches along road, river edge in woods; ---; 109	Brolemann	1919
	Cold marsh; ---; 109. ---; ---; 244	Séguy	1925a
	---; July and Aug.; 301	Bangerter	1926
	Ground depressions; ---; 348	Brolemann	1918
<i>sergenti</i> Theobald	---; ---; 108, 119, 244	Martini	1928
<i>spathipalpis</i> Rondani	Stone vessels; ---; 109	Brolemann	1918
	Stagnant water; ---; 125	Pandazis	1935
	---; ---; 295	Kuntze	1921
<i>territans</i> Walker	---; ---; 34	Kupka & Anschau	1950
	---; ---; 98, 272	Anonymous	1959
	Deep, clear forest pools; Sept. and Oct.; 109	Eckstein	1918
	---; May and June; 109	Eckstein	1919a

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX territans</i> Walker (cont.)	Plant-rich standing waters, shady puddles; ---; 119 ---; overwinter in cellars, sheds, unoccupied dark rooms; 119 ---; woods, lowlands; 119 ---; ---; 155 ---; ---; 301	Eckstein Eckstein Schneider Martini Anonymous	1920 a 1922 1914 1920 b 1944 i
<i>theileri</i> Theobald	---; ---; 58 Lagoon, plain; fairly common; 84. River valley; July-Sept.; 269 (Streams, swamps, ponds and pools, usually in stagnant water) ---; coastal areas; 84 Residual pools from abandoned ricefields, flooded uncultivated ricefields, temporary pools, residual pools from rivers; ---; 109 Watering holes; ---; 109 ---; ---; 125 Pools and ricefields; in houses; 246 Diverse breeding places; domestic and wild; 295 Slow, heavily vegetated rivers and streams; ---; 295 Stagnant and foul water; ---; 295 Pools in riverbed; ---; 295 ---; ---; 333 Stagnant reservoirs, canals with vegetation; ---; 343 ---; ---; 343 (Large ground pools, streams, pools and marshes)	Aitken Edwards Rioux Lavier & Callot Anonymous Cambournac Galliard Gil Collado Gil Collado Galliard & Coutelen Anonymous Monchadskii Barraud Galliard Galliard & Coutelen Stephanides	1954 1928 1958 1939 1944 i 1944 1928 1937 1930 1926 1944 n 1936 1934 1927 1926 1937
<i>tipuliformis</i> Theobald	---; common; 84, 109, 295, 343 Little shallow pools of dried up riverbed, having rocky bottom without vegetation; Sept.; 109 Shallow weedy pools; ---; 125	Galliard Galliard & Coutelen Stephanides	1936 1926 1937

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX tipuliformis</i> Theobald (cont.)	---; ---; 125 (Reedy and weedy pools often in muddy and foul smelling water, stagnant drains with vegetation, enters houses, bites by night, Feb., May)	Kirkpatrick	1925
	Clear or dirty, temporary or permanent water often near dwellings; rarely in houses, June-July, Sept.-Oct.; 246	Braga	1931
	---; Sept.-Oct.; 255	Zotta	1932
<i>torrentium</i> Martini	---; ---; 45, 88, 109	Stone et al.	1959
	Ground water, iron tanks and waterbutts; ---; 98	Anonymous	1959
	---; July-Aug.; 108. Permanent pond, flooded meadow, large pools, artificial container containing manure; July; 228. ---; ---; 244. ---; Aug.; 300	Natvig	1948
	Whirlpool holes in cliffs; ---; 119	Martini	1931
<i>tritaeniorhynchus</i> Giles	---; ---; 84	Galliard	1931
	---; ---; 343 (Ground pools, ricefields, and salt marshes)	Barraud	1934
<i>unguiculata</i> (Edwards)	---; ---; 125	Cardamatis	1931
<i>univittatus</i> Theobald	---; ---; 84	Edwards	1928
	Pond margins, among vegetation; ---; 125	Stephanides	1937
	Salt marsh; ---; 125	Pandazis	1935
	Ricefields, stagnant reservoirs, fresh water; ---; 125, 155, 295	Monchadskii	1936
	---; ---; 155, 295, 357 (Enters houses and bites at night)	Martini	1931
	Edges of streams in masses of filamentous algae; ---; 295	Galliard	1928
	---; ---; 343 (Marshy pools, borrow pits, stagnant drains and canals, shallow wells, seldom in domestic collection of water and ricefields)	Barraud	1934
<i>vagans</i> Wiedemann	---; ---; 244	Anonymous	1945 a

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULEX</i>			
<i>vexans</i> Meigen	In ditches beside road, river edges in forests; ---; 109	Brolemann	1919
<i>vulgaris</i> Linnaeus	---; ---; 300	Stone et al.	1959
<i>CULICADA</i>			
<i>albopunctata</i> Rondani	On river edge; in woods, in houses, May, July; 109	Brolemann	1919
<i>annulipes</i> Meigen	---; ---; 98, 300	Schneider	1914
	---; ---; 109. Woods; ---; 119	Eckstein	1920a
<i>cantans</i> Meigen	---; ---; 34, 45, 98, 155, 193	Schneider	1914
	Edge of waters, ditch, pool, forest; ---; 109	Eckstein	1919 b
	---; Feb.-May; 109	Eckstein	1919 a
	Woods, puddles; July and Aug.; 119°	Eckstein	1920
<i>diversa</i> Theobald	---; ---; 45. ---; ---; 109°	Eckstein	1918
	Pools in and on the edge of woods; March-May; 109	Eckstein	1919 a
	Forest ponds; ---; 109	Eckstein	1919 b
	Woods; ---; 119	Eckstein	1920 a
<i>dorsalis</i> Meigen	Polluted reedy pool margins; ---; 109, 119	Eckstein	1920 a
	---; meadows, by ponds; 109	Eckstein	1918
	---; June-July; 109	Eckstein	1919 a
	---; ---; 278	Schneider	1914
<i>lateralis</i> Meigen	---; ---; 34, 45, 98, 136, 301	Schneider	1914
	Woods; April and May; 109	Eckstein	1919 a
	---; ---; 109°	Eckstein	1918
	Woods; July and Aug.; 119°	Eckstein	1920 a
<i>morsitans</i> Theobald	---; ---; 45, 98. ---; woods, lowlands; 119	Schneider	1914

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICADA</i> <i>nemorosa</i> Meigen	Forests, edges of water, ditch, pool; March and April; 109 ---; woods; 119°	Eckstein	1919 b
<i>nemorosa</i> <i>salina</i> (Ficalbi)	River edge in forest; May; 109	Brolemann	1919
<i>nigrina</i> Eckstein	Camp grounds; meadows; 109° Meadow waters; ---; 109 ---; ---; 119	Eckstein	1918
<i>ornata</i> Meigen	Woods, treeholes, root nodules; Jan.-June; 109° Damp humus; July-Oct.; 109 Woods, treeholes, root nodules; July, Aug.; 119° Damp humus in treehole; Feb. and May; 301	Eckstein	1919 b
<i>vexans</i> Meigen	---; ---; 45, 136, 155, 301 Edge of forests and meadows which are prone to be flooded during the summer months; in woods, Jan.; 109° Forest and meadow pools; March-Oct.; 109 Woods, pools; July-Sept.; 119°	Eckstein	1914
<i>CULICELLA</i> <i>fumipennis</i> (Stephens)	Common in wayside ditches; on walls in outhouses and stables; 98 ---; ---; 136, 155, 272, 331, 357 Ponds in fields and peat bog; ---; 153	MacGregor	1921
<i>litorea</i> (Shute)	---; abundant; 152	Lang	1920
<i>morsitans</i> (Theobald)	---; stables; 84 Ponds with vegetations; in a house, July-Dec.; 92. ---; ---; 136, 272, 357	Blacklock & Carter	1921
	Well; outhouses, stables, cellars, outside latrines; 98	Wilson	1937
		Galliard	1927
		Wesenberg-Lund	1921
		MacGregor	1921

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICELLA</i> <i>morsitans</i> (Theobald) (cont.)	Shallow water in sedge; common in fens; 98	Macan	1939
	Ornamental lakes, ponds, woodland pools, water-storage tanks, waterbutts and ditches; ---; 98°	Wilson	1946
	Standing fresh water; ---; 98, 331	Lang	1920
	Forests; May; 109	Eckstein	1918
	In thick layer of humus on bottom of deep pool in woods; ---; 109	Eckstein	1919
	Rock holes with decaying vegetation; ---; 109	Callot	1939
	Temporary pools; ---; 109	Eckstein	1919 b
	---; Oct.-April; 109	Eckstein	1919 a
	Forests; ---; 119	Eckstein	1920 a
	---; ---; 125	Wilson	1937
	Open water with vegetation, ponds in fields, peat bog and marshy land; ---; 153	Blacklock & Carter	1921
	---; ---; 255	Zotta	1932
<i>theobaldia</i> de Meijere	Forest pools; March and April; 109	Eckstein	1919 a
<i>CULISETA</i> <i>alaskaensis</i> (Ludlow)	---; ---; 88	Anonymous	1944 o
	---; ---; 244	Anonymous	1945 a
<i>annulata</i> (Schrank)	Treehole, coastal areas and mountains; ---; 84. ---; widespread and common; 269	Aitken	1954
	---; ---; 88	Anonymous	1944 o
	Ditches, clear forest ponds; overwinter in cellars; 109°	Eckstein	1918
	Artificial pool; ---; 109	Lavier & Callot	1939
	---; March-Nov.; 109	Eckstein	1919
	Woods, pools; ---; 119	Eckstein	1920 a
	---; ---; 244	Anonymous	1945 a
	---; ---; 301	Anonymous	1944 i
	---; ---; 333	Anonymous	1944 n

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULISETA</i>	---	Anonymous	1944 o
<i>fumipennis</i> (Stephens)	---; ---; 244	Anonymous	1945 a
	Mountains; ---; 269 (Temporary pools, weedy margins of permanent ones, open situations)	Aitken	1954
<i>glaphyoptera</i> (Schiner)	---; ---; 34, 88	Stone et al.	1959
	---; ---; 58, 108, 119, 140, 300, 333	Stone	1961
	---; overwinter in cellars; 109	Eckstein	1918
<i>glaphyoptera</i> <i>zottae</i> (Ungureanu)	---; ---; 255	Stone	1963
<i>litorea</i> (Shute)	---; ---; 98, 109, 295	Stone et al.	1959
	Coastal areas; ---; 269	Aitken	1954
<i>longiareolata</i> (Macquart)	---; ---; 84. ---; widespread, lowlands; 269 (Pools, tanks, wells, barrels and rock holes)	Aitken	1954
	---; ---; 109, 155	Kirkpatrick	1925
	---; ---; 301	Anonymous	1914 i
<i>morsitans</i> (Theobald)	---; ---; 84, 269 (Ground depressions and pools)	Aitken	1954
	---; ---; 88	Anonymous	1944 o
	---; ---; 109	Galliaud	1927
	---; ---; 119°	Anonymous	1944 a
	---; ---; 244	Anonymous	1945 a
	---; ---; 301	Anonymous	1944 i
<i>ochroptera</i> (Peus)	---; ---; 119, 244	Stone et al.	1959
<i>subochrea</i> (Edwards)	---; ---; 84, 269 (Ditches, ponds, garden and farm-yard tanks, fresh and brackish water)	Aitken	1954
<i>theobaldi</i> de Meijere	---; ---; 109	Bresslau	1917
<i>ECCULEX</i> <i>vexans</i> Meigen	---; ---; 45. ---; in marshes, fields and prairies flooded by river Rhone; 109	Seguy	1925 c
	Brackish water; ---; 84	Galillard	1927

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ECCULEX</i> <i>verans</i> Meigen (cont.)	---; ---; 155	Seguy	1925
	Ditches and pools; common June-Aug.; 301°	Bangerter	1926
<i>FINLAYA</i> <i>echina</i> Edwards	---; ---; 109	Seguy	1925c
<i>geniculata</i> (Olivier)	Tree holes; in buildings; 34, 98, 109, 357	Lang	1920
	Tree holes; April-Aug., Oct. and Nov.; 92°	Wesenberg- Lund	1921
	Tree holes; in woods, bite is painful, June; 98°	MacGregor	1921
	Beech tree forest, parks, tree holes; April-Oct.; 119	Vogel	1929 a
	---; April; 155	Seguy	1925
	Tree holes; April-June; 301°	Bangerter	1926
<i>MANSONIA</i> <i>buxtoni</i> (Edwards)	---; ---; 84, 269	Stone et al.	1959
<i>richiardii</i> (Ficalbi)	---; ---; 58, 119, 244, 300	Martini	1928
	---; ---; 84	Anonymous	1944 p
	Attached to water plants at the bottom of shallow water; ---; 92	Wesenberg- Lund	1918
	Reservoirs with vegetation; ---; 92, 98, 140	Monchadskii	1936
	Mud among roots of water plants; bite at dusk and during night, indoors and out, May-July; 98°	Anonymous	1959
	Old riverbed in woods; July-Oct.; 109	Eckstein	1919
	Woods; ---; 109. Woods, pools with much vegetation; Eckstein July and Aug.; 119°	Eckstein	1920
	Drainage ditches, open marshy meadowlands, stagnant water covered with dense vegetation; ---; 119	Peus	1932
	Tree holes; ---; 119	Peus	1934
	---; bites after sundown; 125°	Pandazis	1935
	---; ---; 125	Anonymous	1944 1

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>MANSONIA richardii</i> (Ficalbi) (cont.)	---; vigorous night biter; 140° ---; ---; 155. ---; indoors, 244° Reed swamps, fresh water swamps, steppe rivers; delta areas and steppes; 255 ---; bites day and night especially in evenings, in open and in houses, May-Sept.; 255° Small reservoirs with vegetation; ---; 300° ---; ---; 333	Anonymous Martini Martini Zotta Shtakelberg Anonymous	1945 1920 b 1934 1932 1937 1944 n
<i>richardii</i> <i>ficalbi</i> Seguy	---; Nov.; 6	Marcuzzi	1943
<i>titillans</i> (Walker)	---; ---; 255	Martini	1928
<i>MYZOMYIA hispaniola</i> Theobald	---; Aug.-Dec.; 295 (Small stream, pools, often muddy and with vegetation)	Diaz Flores & Gil Collado	1932
<i>MYZORHYNCHUS hyrcanus</i> <i>pseudopictus</i>	---; ---; 109	Treillard	1937
<i>pseudopictus</i> (Grassi)	Ricefields; ---; 58	Konsuloff	1922
<i>sinensis</i> Wiedemann	---; June-Aug.; 125	Joyeux	1920
<i>sinensis</i> var. <i>pseudopictus</i> Grassi	Marshes of fresh water; rather aggressive; 109 ---; ---; 357	Leger Joyeux	1920 1918
<i>OCHLEROTATUS annulipes</i> (Meigen)	Ponds with vegetation on edges of forests, in meadows; June-Oct., peak July-Sept.; 92 Open pools; ---; 92 Shallow temporary pools among reeds; abundant in woods, severe biter during daytime; 98° Open pools; ---; 98 ---; ---; 119, 125, 136 ---; ---; 333	Wesenberg- Lund Wesenberg- Lund Edwards Lang Seguy Stone	1919 1921 1917 1920 1920 1961

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>OCHLEROTATUS</i> <i>berlandi</i> Seguy	---; crepuscular and nocturnal, enters houses, June- Aug.; 109°	Seguy	1925 c
<i>cantans</i> Meigen	---; ---; 34, 45, 136, 193, 278 ---; ---; 84	Seguy Galliard	1920 1927
	Temporary ponds in forests; May-Aug., especially heavy July-Aug.; 92°	Wesenberg-Lund	1921
	In small temporary marshes of fields; very common in woods, May-Aug.; 109	Seguy	1925 c
	Ponds; May-June; 301°	Bangerter	1926
<i>caspius</i> (Pallas)	---; ---; 34, 109, 119, 136, 155, 357. Fresh and brackish water; rarely enters houses, greatest abundance, summer and autumn; 98°, 331° ---; July; 84	Lang Galliard	1920 1927
	Brackish pools often stagnant with thick layers of algae, drying ponds, salt marshes; seashores, parks, in houses, March-Sept., Nov. and Dec.; 92°	Wesenberg-Lund	1921
	Woodland pool; May; 98	MacGregor	1921
<i>communis</i> (De Geer)	---; ---; 84	Galliard	1927
	Shaded temporary forest ponds and pond exposed to sun; April-Jan.; 92°	Wesenberg-Lund	1921
	Pools in forests; common, very aggressive, by day and sunset, Apr.-Aug.; 109°	Seguy	1925 c
	---; ---; 119	Seguy	1920
	Inundation pool; ---; 228	Natvig	1948
	Ponds; March-June; 301°	Bangerter	1926
<i>curriei</i> (Coquillett)	Brackish water pools; ---; 92. Brackish water pools; May-July; 98. ---; ---; 300 Swampy hollows; bites during day; 98°	Wesenberg-Lund Lang	1921 1920
<i>deebani</i> Seguy	Salt water; June, Oct.; 109	Seguy	1925 c
<i>detritus</i> (Haliday)	Salt marshes; ---; 84 Brackish pools on seashore; July and Aug.; 92. ---; ---; 98, 155 (Brackish water, seaside)	Galliard Wesenberg-Lund	1927 1921

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>OCHLERATUS detritus</i> (Haliday) (cont.)	Brackish water; ---; 98, 152, 272, 331 Pools near coast, salty marshes near coast; Mar.-Nov.; 109 ---; ---; 125. In salt marshes; ---; 269	Lang Seguy Seguy	1920 1925 c 1920
<i>diantaeus</i> (Howard, Dyar & Knab)	Little bog and temporary ponds in forest; May-June, Sept.; 92°	Wesenberg-Lund	1921
<i>dorsalis</i> (Meigen)	---; ---; 6, 357. Salt water; June-July; 125 ---; ---; 92	Joyeux Wesenberg-Lund	1920 1919
	Brackish and salt water; April; 98. Foul puddle of brackish water; July; 331	Edwards	1917
	Natural pond with grassy edges and ditches; ---; 98	Jarvis	1919
	---; seacoast, salty marshes on coast, May-Sept.; 109	Seguy	1925 c
	Standing pools and marshes; in houses, tents and wards, active in the afternoon and bite viciously, Sept.-Oct.; 125°	Waterston	1918
	Clear rivulets with herbaceous vegetation, stagnant ponds; ---; 125	Joyeux	1918
	---; ---; 155	Valle	1919
<i>excrucians</i> (Walker)	Temporary ponds of almost all melted snow, on plains, in forests, edge of woods; March-May, Aug. and Dec.; 92°	Wesenberg-Lund	1921
	---; ---; 109	Seguy	1925 c
<i>geniculatus</i> Olivier	---; ---; 34, 45, 84, 119, 136, 140, 155, 301. Tree holes; ---; 109	Seguy	1920
	Stagnant water in tree holes especially at the base of old beeches and oaks; July-Sept.; 92	Wesenberg-Lund	1919
	Tree holes; vicious and persistent biters, April-Aug.; 98°	Edwards	1917
	---; ---; 98	Blacklock & Carter	1920
<i>jugorum</i> Villeneuve	---; ---; 84, 109	Seguy	1920

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>OCHLEROTATUS</i>			
<i>lesnei</i> Seguy	---; ---; 109	Seguy	1920
<i>lutescens</i> (Fabricius)	Open ponds in meadows and moors, along seacoast; forest, April-May, July-Aug.; 92°. ---; ---; 98, 119	Wesenberg- Lund	1921
	Marshes with vegetation in woods; April-May; 109	Seguy	1925 c
<i>maculatus</i> Meigen	---; bites by day; 98°	Edwards	1917
	---; ---; 98	Moore Hogarth	1928
<i>maculiventris</i> Macquart	---; ---; 109	Seguy	1921
	---; ---; 155	Seguy	1920
<i>mariæ</i> Sargent	Salt water; ---; 109	Seguy	1925 c
<i>nemorosus</i> (Meigen)	Small puddles, beech forests; May-July, especially heavy May-June; 92	Wesenberg- Lund	1919
	Shallow pools with rotting leaves at the bottom; bites freely by day; 98°, 272°	Lang	1920
	Woodland pools and streams; in woods, May, June; 98	MacGregor	1921
	Temporary pools in hollows; vicious biter; 98°	Edwards	1917
	Natural pond with grassy edges, ditches and reedy swamps; ---; 98	Jarvis	1919
	---; Aug.; 109	Peju	1920
<i>nemorosus</i> <i>salinus</i> Brolemann	---; ---; 109	Seguy	1920
<i>nigrinus</i> (Eckstein)	---; ---; 140	Stone	1961
<i>nigripes</i> (Zetterstedt)	Small shallow ponds in spruce forests; all year; 92	Wesenberg- Lund	1919
	---; ---; 109	Seguy	1925 c
<i>ormatus</i> (Meigen)	Forest in small pools; Oct.-Nov.; 92	Wesenberg- Lund	1919
	Tree holes; ---; 119	Eckstein	1920

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>OCHLEROTATUS</i> <i>praeteritus</i> Seguy	---; very aggressive, crepuscular; 109°	Seguy	1925
<i>prodotes</i> (Dyar)	Temporary ponds, dry from June-Mar.; ---; 92	Wesenberg- Lund	1921
<i>punctatus</i> Meigen	---; ---; 45, 58, 119, 136, 357	Seguy	1920
	Brackish water, occasionally in fresh-water marshes near coast; all seacoasts of France, most common on Mediterranean, in houses or far from houses, very aggressive, Mar.-Oct.; 109	Seguy	1925 c
<i>punctor</i> (Kirby)	---; ---; 34	Seguy	1920
	---; ---; 45, 109	Seguy	1925 c
	---; ---; 92	Wesenberg- Lund	1921
	---; ---; 98	Moore Hogarth	1928
	Ditches and ponds; March-June; 301°	Bangerter	1926
<i>quadratimaculatus</i> Macquart	---; ---; 45, 109, 119	Seguy	1920
<i>rusticus</i> (Rossi)	Temporary forest ponds; April-May, Nov.-Jan.; 92°. ---; ---; 155	Wesenberg- Lund	1921
	---; ---; 92, 98, 331, 357	Lang	1920
	Ponds, grassy ditches on fields and woods; very common, aggressive; 109°	Seguy	1925 c
<i>salinus</i> Ficalbi	Brackish or salt water; April; 98. Foul puddle of brackish water; July; 331	Edwards	1917
<i>sticticus</i> Meigen	---; ---; 45. Flooded meadow; ---; 109	Seguy	1925 c
<i>sticticus</i> var. <i>concinnus</i> Stephens	---; ---; 92, 98, 109, 119, 272	Wesenberg- Lund	1921
<i>surcoufi</i> (Theobald)	---; June-July; 109	Seguy	1920
<i>vexans</i> (Meigen)	---; ---; 34, 98, 136	Lang	1920
	Forest ponds; July; 92. Large meadows that are flooded twice a year; cottages and stables, June and July; 109°. ---; common; 119	Wesenberg- Lund	1921

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>OCHLEROTATUS vexans</i> (Meigen) (cont.)	Forests, flooded meadows; ---; 92 ---; ---; 109, 155	Wesenberg-Lund Seguy	1919 1920
<i>waterhousei</i> (Theobald)	Shady pools in woods; active in summer; 98, 272 ---; persistently bite in afternoon, May; 98°	Lang MacGregor	1920 1921
<i>ORTHOPODOMYIA alktionensis</i> MacGregor	Tree holes; ---; 98 Tree holes; forest, Sept.; 109 ---; ---; 155	MacGregor Seguy Seguy	1919 1925 c 1924
<i>pulchripalpis</i> (Rondani)	---; ---; 6. Treeholes; arboreal, all year; 98 ---; bite by day in shade; 98°, 109°, 155° ---; July-Aug.; 98 ---; parks; 98 ---; rare; 98 Treeholes in crevices, ---; 109 Treeholes; ---; 124 Clear water; ---; 125 Treeholes; ---; 125 Treeholes; ---; 155 Cork treeholes; May; 246 ---; ---; 269 (Treeholes) Treeholes; ---; 295	Marshall Shtakelberg Edwards et al. Anonymous Macan Seguy Harvey & Hill Stephanides Livadas & Sphangos Edwards Cambournac Aitken Clavero	1938 1937 1939 1959 1939 1920 1947 1938 1941 1921 1944 1954 1945
<i>PYRETOPHORUS palestinensis</i> (Theobald)	---; Aug.-Sept.; 6. ---; May-Sept.; 125	Joyeux	1920
<i>STEGOMYIA calopus</i> (Meigen)	---; common, associated with the transmission of yellow fever; 124 ---; June-July; 125	Harvey & Hill Joyeux	1947 1920

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>STEGOMYIA</i> <i>fasciata</i> Fabricius	Treeholes; ---; 1 ---; in houses, Sept.-Oct.; 109 ---; Aug.; 109 ---; ---; 109* ---; common in buildings; 125° ---; June-Sept.; 155 Stagnant waters; ---; 295 ---; ---; 301° ---; ---; 333	MacGregor Seguy Seguy Blanchard Waterston Piras Castejon Galli-Valerio Mühlens & Sfarcic	1919 1925 1920 1917 1918 1917 1928 1925 1925
<i>sugens</i> Wiedemann	---; ---; 84	Edwards	1912
<i>vittatus</i> Bigot	---; ---; 84 ---; ---; 295	Seguy Maldonado Sampedro	1925c 1934
<i>TAENIORHYNCHUS</i> <i>buxtoni</i> (Edwards)	Stables; woods; 84°. ---; ---; 269 ---; ---; 84	Aitken Edwards	1954 1928
<i>richiardii</i> (Ficalbi)	---; ---; 34, 58, 108, 140, 255. Sheltered creek covered with submerged plants; rare; 92 ---; common; 45 ---; ---; 45° Mouth of river; ---; 84. Lagoon; ---; 269 ---; July; 84° Weedy ponds and sheltered creek, firmly attached to <i>Sparganium</i> ; May-July, Sept.; 92°. ---; forests; 109. ---; ---; 119, 155, 244 Among roots of waterplants, in mud at the bottom of water; enters houses by night and readily bite, July; 98°, 152° In mud among waterplants; bite at dusk and during night, indoors and out; 98° Fen ditch with <i>Phragmites</i> ; ---; 98	Natvig Anonymous Goetghebuer Aitken Galliard Wesenberg-Lund Edwards et al. Anonymous Macan	1948 1944 c 1925 1954 1927 1921 1939 1949 1939

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TAENIORHYNCHUS richiardii</i> (Ficalbi) (cont.)	---; rural and domestic, all year; 98, 152 Streams with stagnant water and vegetation; enters houses, bites day or night, all year; 109° Fresh or salt water with vegetation; ---; 125 ---; buildings, July-Oct.; 125 ---; near houses, June; 246 ---; ---; 295 ---; common; 300 ---; July; 333	Marshall Callot & Dao Van Ty Joyeux Waterston Cambournac Gil Collado Anonymous Martini	1938 1945 1920 1918 1944 1930 1944 h 1921
<i>THEOBALDIA alaskaensis</i> Ludlow	---; ---; 34, 244, 273. Open waters; in a forest; 119° ---; rural, March, May, June, Aug.-Oct.; 98, 272 ---; hilly districts, rare; 98, 272 ---; April-May; 108. Pond near highway; forest, coastal region and up to 630 m. above sea level, May, Aug.; 228. ---; Feb., April-May, July-Sept.; 300 Dirty reedy bog, ditches; June; 119 Alder forests in marshy districts; ---; 119 ---; ---; 278	Martini Marshall Anonymous Natvig Vogel Peus Monchadskii	1930 1938 1949 1948 1930 1932 1936
<i>annulata</i> Schrank	---; June; 6 Bottom of waters in algae, humus and mud; ---; 34 ---; enters houses, bite painful; 34° ---; bite causes fever; 45° ---; ---; 58. Littoral and mountainous regions; ---; 84 ---; ---; 87, 228 Cement reservoirs, ditches with urine, ponds covered with Lemma; overwinter in cellars, houses, sheds and hollow tree trunks, April, July-Oct.; 92	Marcuzzi Kupka & Anschau Anonymous Goetghebuer Galliard Lang Wesenberg-Lund	1943 1950 1944 k 1925 1927 1920 1921

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>THEOBALDIA annulata</i> Schrank (cont.)	---; common; 92	Anonymous	1944g
	Numerous in wayside ditches and rain-water barrels; common in stables and outhouses, pigsties; 98	MacGregor	1921
	Garden tanks, small pools, foul habitats, fens; domestic, hibernates; 98	Macan	1939
	Stagnant ditches; in houses, all year, active in July; 98	James	1922
	Ornamental lakes, ponds, woodland pools, water storage tanks, and waterbutts; ---; 98°	Wilson	1946
	Water with sewage; ---; 98	Anonymous	1924
	Field dykes; ---; 98	MacArthur	1922
	Clear, sunlit ditch with large clumps of Carex on edges and sparse plant debris on surface; ---; 109	Doby & Rault	1960
	Ditches, ponds in meadows, garden pools, cisterns; ---; 109	Langeron	1916
	Natural and artificial reservoirs, swamps; ---; 109	Shtakelberg	1937
	Rockholes with decaying vegetation; ---; 109	Callot	1939
	---; enters houses, bites all year even during winter; 109°	Langeron	1925
	---; crepuscular and nocturnal; 109	Seguy	1925c
	Open forests, ponds and ditches, artificial containers, treeholes, cement basins, in houses; indoors and outdoors, overwinter in cellars, hollow trees, bite day and night, indoors and outdoors; 119°. Prefer dirty water, water with liquid manure, in bombshelters. ---; 333	Martini	1930
	Unclean waterholes in riverbed; outhouses, April, June and Oct.; 119	Vogel	1933
	Bomb craters, trenches, filter beds, irrigation ditches, artificial containers; ---; 119	Peus	1934
	---; open areas; 119	Martini	1924

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>THEOBALDIA annulata</i> Schrank (cont.)	Domestic, stagnant ditches, waters contaminated by sewage and manure near farms, waterbutts, stream backwaters; hibernate in sheds, hollow trees, painfully bite indoors and out chiefly at dusk; 124°	Anonymous	1949
	Natural and artificial water containers, stagnant pools, ponds, ditches, open and shaded water; hibernate in cellars and attics of dwellings, bite summer and winter, all year; 124°	Marshall	1938
	Stagnant ponds, ditches, in the open or shaded, also in brackish water; bites indoors at night; 124°	Edwards et al.	1939
	Cesspools, roof gutters, collection of stagnant water found in or about houses; ---; 124	Harvey & Hill	1947
	Tanks, reservoirs, and other containers, chiefly in water contaminated by sewage or other nitrogenous matter; ---; 124	Marshall	1942
	---; active Nov.-Dec.; 124	Moore Hogarth	1928
	Shallow, clear ditches and wells; rarely enters houses, bites in the open both by day and at dusk, gregarious all year; 125°	Stephanides	1937
	Salt water; ---; 125. Salt water; May-July; 357	Joyeux	1920
	Lagoons; ---; 125	Pandazis	1935
	Streams; ---; 125	Joyeux	1918
	---; ---; 135	Bos	1934
	---; ---; 140, 244, 300. Marsh pools, ditch, open pond in meadow; hibernate in houses, botanical garden, Jan., April-Sept.; 228°	Natvig	1948
	---; enters houses, all year, peak autumn; 152°	Wilson	1937
	Wooden tub with a mass of putrifying leaves, marshy meadow; in houses; 153	Blacklock & Carter	1921
	---; rare, all year; 155	Hargreaves	1923
	Semi-domestic water, dirty or polluted, stable manure, rain puddles without vegetation; domestic, crepuscular or nocturnal, enters houses for winter; 246	Braga	1931

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>THEOBALDIA annulata</i> Schrank (cont.)	Water with organic matter, puddles and rarely in ricefields; in houses, March; 246 ---; ---; 255 Waterbutts, water in the open; winters indoors in shelters, bites by night in houses, March; 272° Pond, marshy slope, pasture, hoofprints, among slimy scum; ---; 272 Small pools with floating vegetation, holes in rocks with intermittent streams; ---; 295 ---; frequently outdoors than indoors; 295 Ditches, under ice, or stagnant water, ditch with reeds; Dec.-March, May; 301 Small puddle, small earth depression with humus and very little water, very rusty container; ---; 301 Canals with flowing water and reeds; ---; 301 Artificial containers; ---; 301 ---; bite in the evening, on a train; 301° ---; June-Nov.; 301 Clean, quiet water, foul rainwater; cellars, lofts; 331 Ponds; hibernates in houses; 331 Rain barrels, cisterns, ditches, puddles, grenade holes in swamp; seldom in houses; 333	Cambournac Martini MacDougall Keir Gil Collado Gil Collado Galli-Valerio Galli-Valerio Galli-Valerio Galli-Valerio Bangerter Galli-Valerio & Rochaz de Jongh Galli-Valerio Wright Wright Martini Martini Sntakelberg Monchadskii Wesenberg-Lund Edwards	1944 1928 1925 1936a 1937 1930 1934 1921 1926 1926 1913 1916 1923 1924 1921 1924 1937 1936 1925 1924
<i>annulata</i> var. <i>ferruginata</i> Martini	---; June; 119	Martini	1924
<i>annulata</i> var. <i>subochrea</i> Edwards	Pools with vegetation; ---; 92, 98, 109, 125. Natural and artificial reservoirs, swamps; ---; 119° Shaded reservoirs, wells and ditches with salty water; ---; 92, 98, 109, 125 ---; hibernates in cellars; 92 Brackish water ditches; ---; 98	Sntakelberg Monchadskii Wesenberg-Lund Edwards	1937 1936 1925 1924

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>THEOBALDIA</i> <i>arctica</i> Edwards	---; ---; 98	Carter	1921
<i>bergrothi</i> (Edwards)	---; ---; 108	Anonymous	1944 m
	Temporary pools, polluted water, inundation waters, swamp puddles, small and bigger ponds, waters in shade, pond at highway and at seashore; in houses, May-Aug., Sept.; 228. ---; hibernate, July-Aug.; 300	Natvig	1948
<i>fumipennis</i> Stephens	---; ---; 45	Goetghebuer	1925
	---; ---; 92, 244. ---; May-June; 136. Draw well, exposed pool at edge of larger pond; ---; 228	Natvig	1948
	Temporary pools, among weedy margins of permanent pools; rural, all year; 98, 272, 331	Marshall	1938
	Shallow reservoirs with grassy vegetation; ---; 98, 108, 119, 155	Monchadskii	1936
	In open grassy ponds under <i>Lemna</i> ; marshes, bites all day, in houses, April; 109°	Seguy	1925 c
	Shallow, weedy stagnant water; ---; 109, 272, 300, 357	Edwards	1921
	Dried-up hollows or above the water level in partly-filled ones; April-Sept., Nov.; 124, 272	Edwards et al.	1939
	---; ---; 124°	Moore Hogarth	1928
	Shallow reservoirs with vegetation; ---; 125, 272, 300	Shukelberg	1937
	Pools, vegetation; ---; 125	Pandazis	1935
	---; ---; 153	Blacklock & Carter	1921
	---; ---; 255	Anonymous	1944 f
	Artificial pools with organic matter; ---; 295	Clavero	1945
	In waters with high salt content; ---; 357	Martini	1930
<i>glaphyoptera</i> (Schiner)	---; ---; 26. In caves; ---; 34. Whirlpool holes in stones; ---; 119	Martini	1930

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>THEOBALDIA glaphyoptera</i> (Schiner) (cont.)	Small stagnant reservoirs; mountains; 34, 108, 140, 300 ---; ---; 88. Spring pools in mountain forests; July-Sept. and Nov.; 333 ---; overwinter in cave cellars; 109 Granite holes in streambed, cold water; ---; 119, 333 ---; ---; 244 ---; ---; 358	Shtakelberg Apfelbeck Martini Vogel Martini Martini	1937 1928 1920 1933 1928 1922
<i>litorea</i> Shute	Fresh or brackish water, open or densely shaded; rural, all year; 98, 152 Fenland; rare; 98 Dried-up hollows or above the water level in partly filled ones; ---; 98, 152 Small reservoirs, pools; ---; 98 ---; on or near coasts; 98, 152 On coast, collections of water with vegetation, in marshy area with vegetation; ---; 109, 269, 295 Semi-permanent pools, fresh water ditches with vegetation, sub-littoral rushes; ---; 109	Marshall Macan Edwards et al. Monchadskii Anonymous Doby et al. Rioux	1938 1939 1939 1936 1949 1960 1958
<i>longiareolata</i> (Macquart)	---; Sept.; 6 ---; ---; 58, 109 Rock holes with salt water or decaying algae; ---; 84 ---; ---; 87 Foul pools; ---; 98 Artificial containers near houses; in houses, very aggressive; 109° Warm climate, muddy water, farm yards; ---; 109	Marcuzzi Martini Callot Seguy Staley Seguy Roubaud & Colas Belcour	1943 1928 1939 1921 1940 1925c 1933

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY, DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>THEOBALDIA longiareolata</i> (Macquart) (cont.)	Cold and running water of river; ---; 109. ---; ---; 301	Seguy	1925
	Littoral rock pools; ---; 109	Rioux	1958
	---; July-Oct.; 109	Seguy	1920
	---; ---; 109, 155, 357 (Pools and ponds, very often in foul water, rock pools, stagnant canals, unused old wells, enters houses, common Dec.-June, peak March)	Kirkpatrick	1925
	---; ---; 120	Seguy	1924
	Shallow, but clear ditches, wells, waterbutts and artificial containers, predaceous; rarely enters houses, bites in the open both by day and at dusk, common all year; 125°	Stephanides	1937
	Domestic, stagnant water; ---; 125	Pandazis	1935
	Pools; ---; 125	Waterston	1918
	Numerous, frozen in ice, cannibalistic; all year; 155	Hargreaves	1923
	Puddles without vegetation, artificial containers, wells of deep water; Jan., March; 246	Cambournac	1944
	---; domestic, hibernates, April-Oct.; 246°	Braga	1931
	Stagnant water basins, isolated puddles without vegetation, artificial containers; in houses; 295°	Gil Collado	1930
	Collections of water near houses; ---; 295	Pittaluga	1932
	Irrigation zone along coast; ---; 295	Amelivia	1930
	---; ---; 333	Martini	1930
	Pools and ponds; ---; 343	Barraud	1934
<i>longitarsus</i> (Theobald)	---; ---; 45	Goetghebuer	1925
	---; ---; 84	Anonymous	1944 p
	---; in late autumn; 92. Near the coast in brackish water; ---; 98. ---; ---; 108, 301, 357. Forest ponds, open ditches and waterholes, also deep waters, feed on detritus and plankton; in houses, forests, one of the most common species; 119	Martini	1930

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>THEOBALDIA moreitans</i> (Theobald) (cont.)	Open or shaded pools, among vegetation of slow-moving streams, treehole; rural, all year; 98, 152, 331	Marshall	1938
	Woodland pools or ditches, open pools on boulder clay, fens, temporary water, pools overgrown with vegetation; ---; 98	Macan	1939
	Dried-up hollows or above the water level in partly filled ones; ---; 98, 152, 331	Edwards et al.	1939
	Swamps; ----; 98	Jarvis	1919
	Stagnant, slow-flowing water, reservoirs with vegetation; ---; 108°, 109°, 125	Shtakelberg	1937
	Ditches; Mar., May; 109	Boremann	1919
	Clear, sunlit ditch with large clumps of <i>Carex</i> on edges and sparse plant debris on surface; ---, 109	Doby & Rault	1960
	<i>Sphagnum</i> pools; ---, 109	Callot & Dao Van Ty	1945
	---; in woods, April; 109	Seguy	1920
	---; crepuscular; 109	Seguy	1925c
	Lakes, sandpit in park, forest; Jan., March, Sept., Oct.; 119	Vogel	1929 a
	---; April; 119	Vogel	1933
	---; common; 124	Anonymous	1959
	---; / ---; 124°	Moore Hogarth	1928
	---; April-July; 136. Ponds at highway, pool in forest, small ponds, water-filled ditches, well, ditch with slow-running water; ---; 228	Natvig	1948
	---; ---; 140, 244, 300	Martini	1928
	---; ---; 272	Gunn	1935
	---; ---; 295	Clavero	1950
	Pools in ditches, partly filled with fallen leaves and debris; May-Dec.; 331	Wright	1923
<i>ochroptera</i> Peus	Swamps; ---; 119	Monchadskii	1936
<i>siberiensis</i> Ludlow	---; ---; 300	Anonymous	1944 h

TABLE 1 - MOSQUITOES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>THEOBALDIA spathipalpis</i> (Rondani)	Rocky basin of mountain stream; July; 109	Brolemann	1919
	Ponds, overgrown ditches, drinking troughs; ---; 109 Pringault	Pringault	1921
	---; ---; 120, 125, 155	Pringault	1921
	---; ---; 155, 295, 301. ---; common; 357 (In less fresh waters, water barrels)	Martini	1920b
	In cleaner waters; ---; 333	Martini	1921
<i>subochrea</i> Edwards	Rainbarrel; Aug.; 88. ---; in houses, June and Aug.; 119. ---; ---; 140	Britz	1959
	Brackish water, swamps; ---; 92	Edwards	1921
	Ditches, ponds, garden and farmyard tanks, open and shaded, fresh and salt waters; domestic, hibernate in cellars and roof, bite all year; 98°	Marshall	1938
	---; ---; 98, 357	Martini	1930
	---; ---; 108. Water-filled ditch near the highway; ---; 228	Natvig	1948
	Littoral waters; ---; 109	Rioux	1958
	Stagnant ponds, ditches, waterbutts, tanks and other collections of water alike, in open or shaded situations, contaminated with manure, also in brackish water; hibernates in houses, bites indoors by night; 124°	Edwards et al.	1939
	Brackish water on coast; ---; 124	Anonymous	1959
	---; ---; 125	Pandazis	1935
	---; ---; 295	Elvira	1930
<i>subochrea</i> var. <i>ferruginata</i> Martini	---; ---; 119	Martini	1930
<i>THEOBALDINELLA nemorosa</i>	---; in woods during day, at night in houses; 109	Peju & Cordier	1918
<i>URANOTAENIA unguiculata</i> Edwards	Clear streams with vegetation; ---; 6, 125	Joyeux	1918
	River, marsh, lagoon; ---; 84. ---; ---; 269 (Canals, ditches, streams and marsh, pools with vegetation, also in dense shade)	Aitken	1954
	Pools and ponds; ---; 84	Galliard	1927

TABLE 1 - MOSQUITOES (conclusion)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>URANOTAENIA unguiculata</i> Edwards (cont.)	Deep pools in woodlands with vegetation, flooded reeds, saline water, water with organic matter; ---; 109	Rioux	1958
	River pools; May-Sept.; 125	Waterston	1918
	Marsh pools with vegetation; ---; 125	Pandazis	1935
	Shallow and weedy ditch; ---; 125	Stephanides	1937
	---; ---; 140, 255	Stone et al.	1959
	Pits, swamps; ---; 155	Shtakelberg	1937
	---; rare; 155, 343, 357	Edwards	1921
	---; ---; 155 (Reedy and weedy pools in swampy ground, disused wells, drains between ricefields and canals, cannibalistic)	Barraud	1934
	---; ---; 155, 357 (Reedy and weedy pools, especially in borrow pits, wells, ricefields or stagnant water, Oct.-Dec., peak Feb.)	Kirkpatrick	1925
	Rain barrels; around houses on walls, Aug.-Oct.; 255	Zotta	1932
	Abandoned canal; ---; 295	Gil Collado	1937
	Ditch; Aug.; 333	Martini	1921

TABLE 2 - SUMMARY OF DISEASES OR DISEASE ORGANISMS TRANSMITTED BY
MOSQUITOES

SPECIES	DISEASE ORGANISM					DISTRIBUTION
	: VIRUS &	:		:	:	
	: RICKETTSIA	: PROTOZOA	: HELMINTHS	: OTHER	:	
<i>AEDES</i>						
<i>aegypti</i> (Linnaeus)	Yellow fever					109, 246, 295
	Dengue					125, 333
<i>argenteus</i> Poiret	Dengue					125
	Yellow fever					246
<i>fasciatus</i> Fabricius	Yellow fever					98, 109, 155, 246, 295, 331
<i>ANOPHILES</i>						
<i>algeriensis</i> Theobald	Malaria					109, 155
<i>atroparvus</i> Van Thiel	Malaria					98, 109, 119, 136, 246, 295
<i>bifurcatus</i> Linnaeus	Malaria					87, 155, 228
<i>claviger</i> (Meigen)	Malaria					87, 155, 246, 295
<i>clutus</i> Edwards	Malaria					6, 87, 125, 155, 278, 341, 357
<i>hispaniola</i> (Theobald)	Malaria					295
<i>hyrcanus</i> <i>pseudopictus</i> Grassi	Malaria					6, 295
<i>labranchiae</i> Falleroni	Malaria					155, 269, 295
<i>labranchiae</i> <i>atroparvus</i> Van Thiel	Malaria					98, 119, 136, 140, 155, 246, 255, 295
<i>labranchiae</i> <i>labranchiae</i> Falleroni	Malaria					84, 155, 246, 269, 278, 295, 333
<i>maculipennis</i> Meigen	Malaria					6, 34, 84, 98, 109, 125, 136, 155, 246, 269
	<i>Plasmodium</i> <i>vivax</i>					109, 333 (Walsh, 1918)

TABLE 2 - MOSQUITOES (continued)

SPECIES	DISEASE ORGANISM					DISTRIBUTION
	: VIRUS &	:	PROTOZOA	: HELMINTHS	: OTHER :	
	:	:	:	:	:	
<i>ANOPHELES</i>						
<i>maculipennis</i>						
race <i>atroparvus</i>		Malaria				11?
Van Thiel						
<i>maculipennis</i>						
var. <i>atroparvus</i>		Malaria				119, 136, 246, 255,
Van Thiel						295
<i>maculipennis</i>						
<i>labranchiae</i>		Malaria				155, 269
Falleroni						
<i>maculipennis</i>						
var. <i>labranchiae</i>		Malaria				84
Falleroni						
<i>maculipennis</i>						
<i>maculipernis</i>		Malaria				6, 34, 58, 88, 119, 125,
Meigen						140, 244, 255, 333
<i>maculipennis</i>						
race <i>messeae</i>		Malaria				119
Falleroni						
<i>maculipennis</i>						
var. <i>messeae</i>		Malaria				6, 84, 125, 333
(Falleroni)						
<i>maculipennis</i>						
var. <i>sacharovi</i>		Malaria				6
Favre						
<i>nelsoni</i>						
<i>subalpinus</i>		Malaria				6
Hackett &						
Lewis						
<i>messeae</i>						
Falleroni		Malaria				6, 34, 58, 88, 119,
						140, 244, 255
<i>plumbeus</i>						
Stephens		Malaria				34
<i>pseudopictus</i>						
Grassi		Malaria				125, 155
<i>sacharovi</i>						
Favre		Malaria				6, 58, 84, 87, 88,
						125, 155, 255, 341,
						357
		<i>Plasmodium</i>				
		<i>vivax</i>				
						333

TABLE 2 - MOSQUITOES (conclusion)

SPECIES	DISEASE ORGANISM				DISTRIBUTION
	VIRUS &	:	PROTOZOA	HELMINTHS	OTHER
<i>ANOPHELES</i>					
<i>sinensis</i>					
<i>pseudopictus</i>		Malaria			255
Grassi					
<i>superpictus</i>		Malaria			6, 58, 87, 125, 155,
Grassi					255, 278, 295, 333,
					341, 343
			<i>Plasmodium</i>		
			<i>falciparum</i>		333 (Anonymous, 1944)
<i>CULEX</i>					
<i>penicillaris</i>		Malaria			155
Fabricius					
<i>STEGOMYIA</i>					
<i>fasciata</i>		Yellow			
Fabricius		fever			109

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B. BLACK FLIES

The black fly entries include little on biology and disease. Most of the recorded information is on distribution.

In the tables are listed 206 species or subspecies.

TABLE 1 - BLACK FLIES

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>BOOPHTHORA</i> <i>argyreata</i>	Clear water, on stones, plants, paper, in shady forest; all year; 119	Wagner	1925
<i>erythrocephala</i> (De Geer)	---; ---; 336	Ussova	1961
<i>sericata</i> (Meigen)	---; gardens, woods, July; 119°	Enderlein	1921
<i>CNEPHIA</i> <i>blanci</i> Grenier & Theodorides	River; April; 109	Dorier & Grenier	1960
<i>lapponica</i> (Enderlein)	---; ---; 228, 255	Ussova	1961
<i>lesnei</i> (Seguy)	---; ---; 109	Grenier	1953
<i>pallipes</i> (Fries)	---; ---; 108. Rapid, cold mountain streams; ---; 109	Grenier	1953
<i>subexcisum</i> (Edwards)	Temporary streams in woods; ---; 109. ---; ---; 124	Grenier	1953
<i>tredecimatum</i> Edwards	From the stomach of a trout; ---; 98. ---; ---; 109, 228	Davies	1966
	---; ---; 300	Grenier	1953
<i>yerburyi</i> (Edwards)	Temporary streams in woods; ---; 109	Grenier	1953
<i>CNETHA</i> <i>barbativentris</i> Enderlein	---; ---; 119, 244	Enderlein	1929
<i>flavicornis</i> Enderlein	---; ---; 34	Enderlein	1929
<i>freyi</i> Enderlein	---; ---; 108	Enderlein	1929
<i>heymonsi</i> Enderlein	---; ---; 108, 228	Enderlein	1920
<i>incornuta</i> Enderlein	Springs; ---; 119	Enderlein	1929
<i>knochii</i> Enderlein	---; ---; 244	Enderlein	1929

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CNETHA</i>			
<i>lapponica</i> Enderlein	---; ---; 355	Enderlein	1920
<i>lundströmi</i> Enderlein	---; ---; 58	Enderlein	1924
	---; July; 119	Enderlein	1928
<i>tibialis</i> (Macquart)	---; ---; 119	Enderlein	1925
<i>trabeata</i> Enderlein	---; ---; 155	Enderlein	1920
<i>trigonia</i> (Lundstrom)	---; ---; 108	Ussova	1961
<i>vestita</i> Enderlein	---; Aug.; 300	Enderlein	1929
<i>wigandi</i> Enderlein	Ditch, brook; June and July; 119. ---; May; 244	Enderlein	1928
<i>EUSIMULIUM</i>			
<i>annulum</i> (Lundstrom)	---; ---; 92, 98, 108, 109, 119	Ussova	1961
<i>aureum</i> (Fries)	---; ---; 92, 98, 109	Ussova	1961
<i>latipes</i> (Meigen)	---; ---; 336, 351	Ussova	1961
<i>pygmaeum</i> (Zetterstedt)	---; ---; 98, 109, 119	Ussova	1961
<i>FRIESIA</i>			
<i>tristrigata</i> (Enderlein)	---; ---; 34, 58, 109, 295	Enderlein	1925
<i>tristrigata</i> var. <i>obscura</i> Enderlein	---; ---; 58	Enderlein	1924
<i>HELLICHIA</i>			
<i>latifrons</i> Enderlein	---; ---; 228	Enderlein	1925
<i>latimucro</i> Enderlein	---; July; 109	Enderlein	1925
<i>HELODON</i>			
<i>ferruglineus</i> (Wahlberg)	---; ---; 108, 228	Ussova	1961

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>NEVERMANNIA</i>			
<i>angustitarsis</i>			
<i>angustitarsis</i> Edwards	---; June; 333	Baranoff	1926a
<i>angustitarsis</i>			
<i>mazedonica</i> Baranoff	---; ---; 333	Baranoff	1926 a
<i>augustifrons</i> Enderlein	---; ---; 109	Enderlein	1920
<i>aurea</i> Enderlein	---; July; 119	Enderlein	1921
<i>aurea</i>			
<i>prima</i> Baranoff	---; Aug.; 333	Baranoff	1926 a
<i>aurea</i>			
<i>secunda</i> Baranoff	---; ---; 333	Baranoff	1926 a
<i>bulgarica</i> Enderlein	---; ---; 58	Enderlein	1920
<i>latipes</i> Meigen	---; numerous in June; 333	Baranoff	1926 a
<i>lundströmi</i>	Clear water, on stones, plants, paper, in shady forest; all year; 119	Wagner	1925
<i>serbica</i> Baranoff	---; ---; 333	Baranoff	1926 a
<i>tristrigata</i> Enderlein	---; ---; 109, 295	Enderlein	1920
	---; ---; 333	Baranoff	1926 a
<i>ODAGMIA</i>			
<i>angustimanus</i> Enderlein	Clear water, on stones, plants, paper, in shady forest; all year; 119	Wagner	1925
<i>kondici</i> Baranoff	---; April-June; 333	Baranoff	1926
<i>konsuloffi</i> Enderlein	---; ---; 58	Enderlein	1924
<i>monticola</i> Friederichs	---; ---; 58	Enderlein	1924
	---; ---; 98, 109, 119	Ussova	1961
	---; April; 333	Baranoff	1926 a

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ODAGMIA</i>			
<i>ornata</i>	---; ---; 58	Enderlein	1924
(Meigen)	Clear water, on stones, plants, paper, in shady forest; all year; 119	Wagner	1925
	---; ---; 336	Ussova	1961
<i>ornata</i>	---; ---; 58	Enderlein	1924
var. <i>nitidifrons</i>	---		
(Edwards)	---; ---; 333	Baranoff	1926a
<i>ornata</i>	Small stream; ---; 333	Baranoff	1926a
<i>prima</i>			
Baranoff			
<i>ornata</i>	---; common; 333	Baranoff	1926a
<i>secunda</i>			
Baranoff			
<i>ruficornis</i>			
<i>prima</i>	---; ---; 333	Baranoff	1926a
Baranoff			
<i>ruficornis</i>			
<i>secunda</i>	---; ---; 333	Baranoff	1926a
Baranoff			
<i>simoffi</i>	---; ---; 58	Enderlein	1924
Enderlein			
<i>specularifrons</i>	---; ---; 228	Enderlein	1920
Enderlein			
<i>variegata</i>	---; ---; 333	Baranoff	1926a
Meigen			
<i>wilhelminiana</i>	---; ---; 119	Enderlein	1921
Enderlein			
<i>PROSIMULIUM</i>			
<i>albense</i>	In crevice in rocky blockade filled with water from melted snow, in a brook; ---; 155	Kivosecchi	1961a
Rivosecchi			
<i>angustitarsis</i>			
Lundström	In springs, small irrigation ditches with very slow clear or turbid water, grass, 20-48 m. altitude; ---; 155	Rivosecchi	1961
<i>arvernense</i>	Small rapid stony streams; ---; 98	Davies	1966
Grenier			
<i>balcanicum</i>	---; ---; 58	Larrousse	1926
(Enderlein)			
<i>gallii</i>	---; ---; 140, 255, 301	Enderlein	1925
(Edwards)			

TABLE 1 ~ BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PROSIMULIUM hirtipes</i> (Fries)	---; ---; 12, 84. Mountains; ---; 109 ---; ---; 88, 108, 228, 336 (Bites man) ---; ---; 98. Abundant in streams; in light traps; 272 (Rapid mountain streams, cascading parts of larger main streams on valley bottoms, in streams only during cold month, April-May) ---; ---; 119, 140	Grenier Ussova Davies Enderlein	1953 1961 1966 1925
<i>hirtipes</i> var. <i>arvernense</i> Grenier	---; ---; 109	Grenier	1953
<i>inflatum</i> Davies	---; ---; 98, 331. ---; abundant at higher altitudes; 272 (Upper parts of rapid mountain streams, mainly above 650 m. in permanently cold water, July-Aug.) ---; ---; 109	Davies Dorier	1966 1960
<i>macropyga</i> (Lundstrom)	---; ---; 108, 228	Ussova	1961
<i>nigripes</i> Enderlein	---; May; 98, 119. ---; June; 244	Enderlein	1925
<i>pexifrons</i> Enderlein	---; July; 34	Enderlein	1925
<i>rufipes</i> (Meigen)	---; ---; 34 ---; ---; 58 ---; ---; 109	Enderlein Enderlein Dorier	1925 1924 1960
<i>rufipes</i> var. <i>fulvipes</i> Edwards	---; ---; 58	Enderlein	1924
<i>ursinum</i> (Edwards)	---; ---; 41	Stone	1965
<i>SCHÖNBAUERIA matthiesseni</i> Enderlein	---; ---; 119	Enderlein	1920
<i>peetsi</i> Enderlein	---; ---; 119, 300	Enderlein	1920
<i>pusilla</i> (Fries)	---; ---; 119, 228, 300	Ussova	1961

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SCHÖNBAUERIA</i> <i>tömösavaryi</i> Enderlein	---; ---; 119	Enderlein	1920
<i>SIMULIA</i> <i>latipes</i> Meigen	---; in grass; 88	Landrock	1908
<i>maculata</i> Meigen	---; forest edges; 88	Landrock	1908
<i>ornata</i> Meigen	---; sunny forest edge; 88°	Landrock	1908
<i>reptans</i> Linnaeus	---; meadows; 88	Landrock	1908
<i>SIMULIUM</i> <i>alternans</i> Enderlein	Mountain streams; ---; 58 ---; ---; 88	Brassler Enderlein	1927 1920
<i>americanum</i> Doby & David	---; ---; 98, 272 (Small stony upland streams)	Davies	1966
<i>angustipes</i> Edwards	---; ---; 98, 152, 272. ---; March-Oct.; 124 ---; ---; 119	Edwards Friederichs	1915 1921 a
	Small weedy streams, larger lowland rivers; May-Sept.; 124	Davies	1966
<i>angustitarsis</i> (Lundström)	Abundant in upper reaches of small to medium sized streams, around porous rock formations, widely distributed in the south, relatively rare in the north; May-June; .98. Relatively rare; ---; 272	Davies	1966
	Weedy rivers with moderate current, rarely in small streams; ---; 98, 331	Edwards et al.	1939
	Rivers with vegetation; ---; 109	Grenier	1953
	---; Mar., Oct.; 109. ---; ---; 301	Seguy	1925
<i>annulitarse</i> Zetterstedt	---; ---; 336	Edwards	1924
<i>argyreatum</i> Meigen	---; rare; 34 ---; river form; 92	Anonymous Ussing	1944 g 1925
	Moderate current, weedy rivers, leaves and stems of <i>Scirpus lacustris</i> and other plants with ribbon-like leaves; March, April, June; 98°	Edwards	1920
	Natural and artificial lake and pond outlets; widespread; 98, 272	Davies	1966

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM argyrestum</i> Meigen (cont.)	---; troublesome in spring and in Aug.; 98°. ---; April-June, Aug. and Nov.; 124	Edwards	1915
	Water plants, meadows; April, May, July, Aug.; 119°	Friederichs	1921a
	---; ---; 119	Wilhelmi	1921
<i>ariasi</i> Seguy	---; ---; 295, 348	Larrouse	1926
<i>aureum</i> Fries	---; rare, coast; 84	Edwards	1928
	Small temporary streams, especially stony, sometimes also in rivers; Aug.; 98. Small rills; ---; 272	Edwards	1920
	Stream with sandy and stony bottom, strong current and sparse vegetation; March; 109	Doby & David	1960
	Submerged grass blades in small stream, spring; ---; 109	Puri	1925
	Small temporary sandy or rocky brooklets around forest; ---; 109	Grenier	1960
	Rivers; April; 109	Dorier & Grenier	1960
	---; shaded areas, June-July, Oct.-Nov.; 109	Seguy	1925
	Brooks, leaves of umbellifere; ---; 119. ---; ---; 301	Friederichs	1921a
	Small streams and rills especially with stony or gravelly bottom; ---; 124	Edwards et al.	1939
	---; March-Aug.; 124. ---; ---; 331	Edwards	1915
	In slow or rapid, turbid or clear water, springs, brooks, ditches, canals, with rocks and/or grass, 7-664 m. altitude; ---; 155	Rivosecchi	1961
	---; ---; 269, 300 (On rocks and vegetation in small, relatively warm slow-flowing streams)	Stone	1964
	Sizable semi-upland and lowland streams, small stream; May-Sept.; 272	Zahar	1951
<i>auricoma</i> Meigen	Mountains; ---; 34. Leaves of umbellifere, plankton, waterplants, stones in brooks; Aug.; 119	Friederichs	1921a
	---; ---; 58	Enderlein	1924
	---; ---; 84. Cold mountain waters in rapids; July-Aug.; 109	Grenier	1953

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM</i> <i>auricoma</i> Meigen (cont.)	Stream, clear, rapidly flowing water, with rocks and grass, 50 m. altitude; ---; 155	Rivosecchi	1961
<i>austeni</i> Edwards	Slower flowing weedy lowland rivers and large streams; April-May; 98	Davies	1966
	---; ---; 109, 228, 300	Ussova	1961
	---; Sept.; 119	Friederichs	1921a
	---; fields, April and May; 124	Edwards	1915
<i>balcanica</i> (Enderlein)	---; ---; 58	Smart	1945
<i>baracorne</i> Smart	---; ---; 333	Smart	1944
<i>barbativentris</i> Enderlein	---; ---; 119	Smart	1945
<i>beckeri</i> Roubaud	---; ---; 109	Seguy	1925
<i>beazzi</i> Corti	Rapid and less rapid flowing waters; ---; 109. ---; ---; 333	Grenier	1953
	Rivers; Apr.-May; 109	Dorier & Grenier	1960
	In ditches, springs, rivers, streams with clear rapid or slow flowing water with rocks or grass, 100-664 m. altitude; ---; 155	Rivosecchi	1961
<i>brevicaule</i> Dorier & Grenier	---; ---; 98, 272 (Stony lowland streams, April-June). Small stony creek; ---; 109	Davies	1966
<i>britannicum</i> Davies	River, at road bridge; Nov.; 331	Davies	1966
<i>canalicum</i> Smart	---; ---; 58	Smart	1944
<i>celticum</i> Davies	Stream in upland rough pasture; Aug. and Oct.; 331	Davies	1966
<i>columbaczense</i> Schönherr	---; ---; 58, 255, 333 ---; June; 84	Anonymous	1944b
	Quiet places in river with much vegetation, river banks, leaves and twigs near banks; on or near river banks, April and May; 119	Villeneuve	1918
		Miessner	1914

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM columbacense</i> Schönherr (cont.)	---; ---; 255°	Ciurea & Dinulescu	1924
	In branches of <i>Salix</i> ; outdoors and in houses, aggressive, bite is poisonous and disabling, causes pain in joints, headaches, sleeplessness, psychotic depressions and much itching, March- June; 333°	Baranoff	1937
<i>columbatschense</i> (Fabricius)	Stony creeks; ---; 58. ---; ---; 255, 333	Enderlein	1924
	---; ---; 336 (Small streams and in the vicinity of larger rivers, on floating vegetation, on rocks, under water and streambed, a serious pest)	Stone	1964
<i>costatum</i> Friederichs	Cold water; ---; 92	Ussing	1925
	Small rapid streams; ---; 98	Edwards et al.	1939
	Cold, moderately rapid brooks; ---; 109	Grenier	1953
	Forest brooks, grass near brooks; Aug.; 119	Friederichs	1921a
	Small springfed streams; ---; 124	Davies	1966
<i>decorum</i> Walker	Streams with bottom of moss-covered stones, rapid current; Mar.; 109	Doby & David	1960
	---; July-Sept.; 109	Grenier	1953
<i>delphinense</i> Villeneuve	---; July, Oct.; 109	Seguy	1925
<i>dunfellense</i> Davies	Cold stony mountain streams; June-Sept.; 98	Davies	1966
<i>equinum</i> Linnaeus	---; ---; 45. ---; in thickets, March-Nov.; 109, 119	Seguy	1925
	Mountain streams; ---; 58	Brassler	1927
	In rivers with slow or moderate current, on water plants; most numerous in April, July and Sept.; 92°, et al. 98°, 272°, 331°	Edwards et al.	1939
	River; ---; 92	Ussing	1925
	Associated with water plants; ---; 98	Pentelow	1935
	Moderate current streams with vegetations; ---; 109	Grenier	1953
	Large unpolluted streams and rivers with steady moderate current, on beds of <i>Ranunculus fluitans</i> ; May-July; 124	Davies	1966

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM equinum</i> Linnaeus (cont.)	---; March-Oct.; 124°. ---; ---; 152, 331 In ditch, clear, rapid, flowing water with grass; ---; 155	Edwards	1915
	---; ---; 272	Zahar	1951
<i>equinum mediterraneum</i> Puri	---; ---; 357	Grenier	1953
<i>erythrocephalum</i> De Geer	Weedy rivers; April, June; 92°, 98°, 272° ---; ---; 98	Edwards et al.	1939
	Forests; March-July; 109	Steward	1937
	Torrential streams; most numerous in muggy, quiet weather, July; 228°	Seguy	1925
<i>erythrocephalum</i> var. <i>sericatum</i> Meigen	Moderate streams, large rivers with steady current; early spring and July; 98, 272	Davies	1966
	Rivers with vegetation; ---; 109°	Grenier	1953
<i>facula</i>	Mountain streams; ---; 58	Brassler	1927
<i>ferrugineum</i> Wahlberg	---; ---; 336	Edwards	1924
<i>fulvipes</i> Edwards	---; 2000 m. altitude; 58	Edwards	1921
<i>fuscipes</i> Fries	---; May; 109	Seguy	1925
	Torrential streams; most numerous in muggy, quiet weather, July; 228°	Anonymous	1944
<i>galii</i> Edwards	---; Aug.; 109. ---; Aug.-Sept.; 301	Seguy	1925
	Strong water currents; ---; 301	Galli-Valerio	1927 +
	---; in mountains, at 1512 m. altitude, June and Nov.; 301	Galli-Valerio	1925
<i>heidemreichi</i> Enderlein	---; ---; 119	Enderlein	1920
<i>heringi</i> Enderlein	---; ---; 34, 119	Larrousse	1926

TABLE I - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM hirtipes</i> Friis	---; ---; 34, 356	Anonymous	1944 g
	---; forests; 84	Edwards	1928
	---; ---; 98	Edwards	1920
	In very fast stream; ---; 109	Puri	1925
	---; Mar., May-July; 109. ---; Aug.; 301	Seguy	1925
	---; May-July; 124.	Edwards	1915
	Torrential streams; most numerous in muggy, quiet weather, July; 228°	Anonymous	1944
	Among moss of stones at edges of river; July; 228	Edwards	1924
	Rapid hill streams, scattered over large stones or on the rocky bottom; May; 272°	Edwards et al.	1939
	Rocky hill streams; ---; 272. ---; ---; 355	Smart	1936
<i>hirtipes</i> var. <i>arvernense</i>	Streams with bottom of bare or moss-covered stones, rapid current with little vegetation; Mar.; 109	Doby & David	1960
<i>humerale</i> Zetterstedt	---; ---; 336	Edwards	1924
<i>konsuloffi</i> Enderlein	Mountain streams; ---; 58	Brassler	1927
<i>lamachi</i> Doby & David	Small irrigation ditch with rocky bottom and vegetation in streambed and dragging in fast current; Oct.; 109	Doby & David	1960
<i>lanio</i> (Linnaeus)	---; ---; 336	Edwards	1924
<i>latigonium</i> Rubtzov	In outlet stream; ---; 98	Davies	1966
<i>latimans</i> Enderlein	Mountain streams; ---; 58	Brassler	1927
	---; ---; 98, 119	Enderlein	1920
<i>latipes</i> Meigen	---; ---; 34	Anonymous	1944 g
	---; June; 84	Villeneuve	1918
	Under stones in streambed; ---; 92. Small streams and rills with gravelly bottom, also in larger streams; April and May; 98, 272	Edwards et al.	1939

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM latipes</i> Meigen (cont.)	---; cold water; 92	Ussing	1925
	Small temporary streams and rills, especially those with stony bottoms, undersides of stones or dead leaves and twigs; April, June; 98°	Edwards	1920
	Streams; possible transmitter of pellegra virus; 98	Walsh	1918
	Streams with fast or moderate current, bottom or sand or moss-covered stones, dense or sparse vegetation, irrigation ditches with vegetation covering bed and dragging in rapid current, rocky bottom; Mar., Sept.; 109	Doby & David	1960
	Submerged grass blades in small streams; ---; 109	Puri	1925
	Mountains, small rivers and streams; ---; 109	Grenier	1953
	---; Apr.-Aug.; 109	Seguy	1925
	Brooks in shady forests, under water leaves; ---; 119	Friederichs	1921a
	---; April-Sept.; 124. ---; ---; 152, 331	Edwards	1915
	Small hill streams; ---; 272	Smart	1936
	---; May-Sept.; 272	Zahar	1951
	---; ---; 300	Anonymous	1944 e
	Small streamlets; ---; 336	Edwards	1924
<i>lesnei</i> Seguy	---; Aug.; 109	Seguy	1925
<i>lineatum</i> Meigen	Water plants; near rivers; 119	Matthiesen et al.	1924
<i>luryhayae</i> Smart	---; ---; 109	Smart	1944
<i>lyra</i>	---; ---; 300	Anonymous	1944 e
	Waterfalls, stones in the rapids above falls; Aug.; 336	Edwards	1924
<i>macropyga</i> Friederichs	---; ---; 300	Anonymous	1944 e

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM maculatum</i> Meigen	---; April, June; 109 Water plants, brooks and rivers; May, Aug.; 119 ---; common and occasionally attack man; 136°	Villeneuve Friederichs Anonymous	1918 1921a 1944 a
<i>mediterraneum</i> (Puri)	In ditch, river, canal, spring, rapid or slow-flowing, clear or turbid water with rocks and/or grass; ---; 155	Rivosecchi	1961
<i>montanum</i> Enderlein	Small tributary, in grasses of stream margin, at 1100 m. altitude; Oct.; 119	Enderlein	1921
<i>monticola</i> Friederichs	Mountain streams; ---; 58 ---; rare; 84 Rocks and stones in rapid hill streams; May and Aug.; 98, 272 Mountain streams; ---; 98 In streams with rocky bottom, rapid current and with little vegetation; Mar., Aug.; 109 Mountain water in rapids; ---; 109 ---; March, May, Sept.; 109 Mountain streams with rocks and pebbles, rapid current and sparse vegetation; Aug.; 119 Upper reaches of rapid stony hill stream; ---; 124. Fast-flowing waters; ---; 272, 331 (May-Sept.) In spring; ---; 155	Brassler Edwards et al. Pentelow Doby & David Grenier Seguy Friederichs Davies Rivosecchi	1927 1928 1939 1935 1960 1953 1925 1921a 1966 1961
<i>morsitans</i> Edwards	---; ---; 92, 108, 300 Slow-flowing sections of weedy rivers and larger streams; rare but widespread, May, July-Aug.; 98°, 272 Weedy rivers of moderate current; May, July; 98 ---; bites in forest; 98°. ---; April-Aug., especially May-June; 124	Ussova Davies Edwards Edwards	1961 1966 1920 1915

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM</i> <i>morsitans</i> Edwards (cont.)	---; ---; 109°	Grenier	1953
<i>nanum</i> Zetterstedt	---; June; 109	Villeneuve	1918
	Torrential streams; most numerous in muggy, quiet weather, July; 228	Anonymous	1944
<i>naturale</i> Davies	Peaty bog streams; ---; 98, 272	Davies	1966
<i>nigripes</i> Enderlein	---; ---; 119	Larrousse	1926
<i>nitidifrons</i> Edwards	Basin-rich rivers, larger stony streams; April-May; 98. Small rivulets, large stony streams, high streams of mountains; April-May; 124. ---; ---; 272	Davies	1966
<i>nölleri</i> Friederichs	---; ---; 92, 98, 108, 119, 300 (Bites man) Rivers; ---; 98, 109 Fishpond drains; May; 119 ---; Sept.; 272 ---; ---; 331	Ussova Puri Friederichs Zahar Edwards et al.	1961 1925 1921a 1951 1939
<i>ornatum</i> Meigen	Mountain streams; ---; 58 ---; Dec.; 73. Running water; March-Aug., Oct., especially April and May; 124. ---; ---; 152 ---; ---; 73, 98, 272, 331 (River, small streams, attached to water plants, under stones, Feb.-Dec., bites on warm and still days, chiefly in the afternoon sun) River form, cold water form, forest brooks; ---; 92 ---; ---; 92 Large streams or small rivers with moderate current and plenty of aquatic vegetation, also in stony streams; ---; 98, 272, 331 Associated with water plants; ---; 98 ---; March-Nov.; 98	Brassler Edwards Edwards Ussing Anonymous Edwards et al. Pentelow Seguy	1927 1915 1920 1925 1944d 1939 1935 1925

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM</i> <i>ornatum</i> Meigen (cont.)	Stream with pebbles or sand or moss-covered stones on bottom with rapid or moderate current, with dense or sparse vegetation, irrigation ditch with flat stones and vegetation on bottom, rapid current; Feb.; 109	Doby & David	1960
	On blades of grass in rivers and streams; ---; 109	Puri	1925
	Moderate current stream with vegetation; ---; 109	Grenier	1943
	Water plants, water near forests; Apr.-May; 119. ---; ---; 301	Friederichs	1921 a
	All lowland waters, often organically polluted streams and large rivers; may attack man, Feb.-April, June-Nov.; 124	Davies	1966
	In slow or rapidly flowing water, streams, springs, ditches, brooks, turbid or clear with rocks and/or grass, up to 400 m. altitude; ---; 155	Rivosecchi	1961
	Torrential streams; numerous in muggy, quiet weather, July; 228°	Anonymous	1944
	---; Dec.-Jan., May-Sept.; 272	Zahar	1951
	Strong water currents; ---; 301	Galli-Valerio	1927 a
	---; June-July; 301	Galli-Valerio	1926 +
	---; ---; 301°	Galli-Valerio	1923
	Stones in small streams, heavily shaded by alternating riffles and deep muddy pools; May-Sept.; 331	Williams et al.	1961
<i>ornatum</i> var. <i>nitidifrons</i> Edwards	Mountain streams; ---; 58	Brassler	1927
	---; rare; 84	Edwards	1928
	Water plants, small streams; May; 98	Edwards	1920
	Small streams with vegetation; ---; 109	Grenier	1953
	Little streams; Apr., June; 119°	Friederichs	1921 a
	In spring, rapidly flowing clear water with grass; ---; 155	Rivosecchi	1961
	---; ---; 272°	Edwards	1927
	---; ---; 272	Edwards et al.	1939

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM</i> <i>ornatum</i> <i>pratorum</i> Friederichs	Warm running water; June; 119	Friederichs	1921a
<i>ornatum</i> <i>spinosum</i>	Streams with rapid or moderate current with rocky or sandy bottom with dense or sparse vegetation, streams with bottom of moss-covered stones, small irrigation ditches with rocky bottom and vegetation and rapid current; Feb.-Mar., June-Aug.; 109	Doby & David	1960
<i>orsovae</i> Smart	---; ---; 255	Smart	1944
<i>pallipes</i> (Fries)	---; ---; 109	Seguy	1925
	Torrential streams; numerous in muggy, quiet weather, July; 228°	Anonymous	1944
	Waterfall, stones in the rapids above the falls; Aug.; 336	Edwards	1924
<i>parvum</i> Enderlein	---; ---; 336	Enderlein	1920
<i>pictum</i> Meigen	---; ---; 119	Friederichs	1921 a
<i>polae</i> Smart	---; ---; 119	Smart	1944
<i>pontinum</i> Rivosecchi	In weakly sulphurous springs or in course of water originating from strongly sulphurous springs, rapid or slow flowing water, turbid, clear or opalescent water with rocks and/or grass; ---; 155	Rivosecchi	1961
<i>pseudoreptans</i> Enderlein	---; May; 119	Enderlein	1935
<i>pubiventris</i> Zetterstedt	---; ---; 336	Edwards	1924
<i>pulchripes</i> Austen	---; --; 88	Austen	1925
<i>pusillum</i> Fries	---; Aug.; 109	Seguy	1925
	---; ---; 228, 300	Edwards	1924
<i>reptans</i> Linnaeus	Running streams; ---; 34°, 255°	Anonymous	1944 g
	---; ---; 45, 92. ---; March, May-July; 109	Seguy	1925

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM</i> <i>reptans</i> Linnaeus (cont.)	---; ---; 88	Anonymous	1944 i
	Swift shady rivers, in mountainous regions, water plants, on flat upper surfaces of stones; May, June; 98	Edwards	1920
	---; possible transmitter of pellegra virus; 98	Walsh	1918
	---; ---; 98°, 331°. Swift shady rivers in hilly regions, on flat surfaces of stones and water plants; ---; 272°	Edwards et al.	1939
	---; ---; 108, 300	Ussova	1961
	Stream with rocky bottom, sparse vegetation; ---; 109	Doby & David	1960
	Rivers; April-May; 109	Dorier & Grenier	1960
	---; occasionally bites man; 109°	Grenier	1953
	Small, rocky rapids or snells without water plants, on twigs, near water edge; May, Aug.; 119°	Friederichs	1921 a
	---; May-Aug., especially June-July; 124°. ---; ---; 152	Edwards	1915
	In river; ---; 155	Kivosecchi	1961
	Torrential streams; numerous in muggy, quiet weather, July; 228°	Anonymous	1944
	---; ---; 244	Friederichs	1921
	Larger semi-upland streams and main drainage basins, Zahar on stones and vegetation; April-Sept.; 272°		1951
	Stony, larger hill streams; ---; 272	Smart	1936
	River stones in rapidly flowing water, slightly polluted hard water trout-stream shaded by trees; May-Sept.; 331	Williams et al.	1961
	---; ---; 355	Enderlein	1920
<i>reptans</i> <i>calopum</i> Baranoff	Stream; ---; 333	Baranoff	1926 a
<i>reptans</i> <i>columbaczense</i> Schönauer	---; bites man during day, Apr.-May; 58°. ---; ---; 255	Anonymous	1944 f

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM</i> <i>reptans</i> <i>columbaense</i> Schönauer (cont.)	---; bloodsucker, enters eyes, nasal passages and throats of man; 255°	Anonymous	1944 c
	Rapidly flowing, turbulent water about the rocks and at 20 feet below the surface; bites man by day, April-May; 333° (Bite is extremely irritating and causes swelling especially exposed parts of eyelids and hands)	Anonymous	1944 h
	Prefer larger waters, rivers; April-May; 333	Baranoff	1926 a
<i>reptans</i> var. <i>galeratum</i> Edwards	Riverbed on weeds and stones, associated with water plants; ---; 98. In waterfalls; ---; 300	Pentelow	1935
	Large rivers and tributaries of valleys with stony substratum, with beds of <i>Ranunculus fluitans</i> ; April-Aug.; 124°	Davies	1966
<i>reptans</i> <i>ornatoide</i> Baranoff	---; ---; 333	Baranoff	1926 a
<i>rövdeae</i> Smart	---; ---; 228	Smart	1944
<i>rufipes</i> Meigen	Mountain streams; ---; 58	Brassler	1927
	---; May, July-Aug.; 109	Seguy	1925
	---; ---; 301	Wilhelmi	1920
	---; ---; 336	Edwards	1924
	---; ---; 343	Seguy	1925 +
<i>rufipes</i> var. <i>fulcipes</i>	Mountain streams; ---; 58	Brassler	1927
<i>rupicolum</i> Seguy & Dorier	---; ---; 12, 109	Grenier	1953
<i>rupicolum</i> form <i>hispaniola</i> Grenier & Bertrand	Rivers; ---; 109	Dorier & Grenier	1960
<i>salopiense</i> Edwards	Larger lowland streams and rivers with steady moderate current; ---; 98	Davies	1966
	Submerged water plants in rivers of moderate current; ---; 98	Edwards et al.	1939

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM</i> <i>salopiense</i> Edwards (cont.)	Rivers; ---; 109. ---; ---; 124, 333 In river, ditch, stream, rapid or slow flowing, turbid or clear water with rocks and/or grass; ---; 155	Grenier Rivosecchi	1953 1961
<i>schönbaueri</i> (Enderlein)	---; ---; 6, 34, 255 Mountain streams; ---; 58 ---; ---; 88	Enderlein Brassler Enderlein	1924 1927 1920
<i>septentrionale</i> Enderlein	---; June and July; 355	Enderlein	1935
<i>simoffi</i> Enderlein	Mountain streams; ---; 58	Brassler	1927
<i>spinosum</i> Doby & Deblock	In small to large streams; ---; 98, 272	Davies	1966
<i>subexcisum</i> Edwards	In small temporary rills; April-May; 98, 272 Stony, grassy, temporary streams; ---; 98 Shallow, open temporary gently flowing streams; ---; 124 ---; April-June; 124	Edwards et al. Edwards Davies Edwards	1939 1920 1966 1915
<i>sublacustre</i> Davies	Lake outlet streams, coating rocks and submerged vegetation; May-Sept.; 98	Davies	1966
<i>subornatum</i> Edwards	---; ---; 98, 331 ---; March-April; 109	Edwards Seguy	1920 1925
<i>tenuifrons</i> Enderlein	---; ---; 119	Enderlein	1920
<i>tenuimanus</i> Enderlein	---; ---; 108, 119	Enderlein	1920
<i>tredecimatum</i> Edwards	From the stomach of a trout; ---; 98 ---; ---; 228	Puri Edwards et al.	1925 1939
<i>tristrigata</i>	Mountain streams; ---; 58	Brassler	1927

TABLE 1 - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM</i> <i>tristrigata</i> var. <i>obsecra</i>	Mountain streams; ---; 58	Brassier	1927
<i>tristrigatum</i> var. <i>obscurum</i> Enderlein	---; ---; 58	Larrousse	1926
<i>truncatum</i> Lundstrom	---; ---; 108	Ussova	1961
<i>tuberosum</i> (Lundström)	---; ---; 12	Grenier	1953
	Rapid rivers, usually on large stones; ---; 98, 272°	Edwards et al.	1939
	---; ---; 98°. ---; April-Aug., Nov.; 124°	Edwards	1915
	---; ---; 98, 108, 300 (Bites man)	Ussova	1961
	---; June-Sept., common in mountainous regions; 109	Seguy	1925
	---; May; 109	Dorier & Grenier	1960
	Shady, swift rivers in mountains, not at high altitude; ---; 124	Edwards	1920
	Stony upper parts of rivers and tributaries in treeless valleys; April-Aug.; 124 .	Davies	1966
	Stony, larger hill streams; ---; 272	Smart	1936
	Unpolluted soft water in mountain stream; May; 331	Williams et al.	1961
<i>urbanum</i> Davies	Lowland streams; ---; 98	Davies	1966
<i>varia</i> Meigen	---; ---; 34	Anonymous	1944 g
<i>varicolor</i> Seguy	---; ---; 109	Seguy	1925
<i>variegatum</i> Meigen	---; common in mountains; 84	Edwards	1928
	Swift stony streams; ---; 98, 272, 331	Edwards et al.	1939
	Rapid water on rocks with vegetation; ---; 109	Grenier	1953
	Rivers; ---; 109	Dorier & Grenier	1960

TABLE I - BLACK FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SIMULIUM</i> <i>variegatum</i> Meigen (cont.)	---; April, July; 109 Deeper mountain streams without water plants, small water plants, stones and rocks; Aug.; 119 Swift stony rivers and streams; May, June, Aug.; 124 ---; April-Sept.; 124 In ditches, rivers, rapid or slow, clear or turbid water, with rocks or grass, 50-295 m. altitude; ---; 155 Stony, larger hill streams; ---; 272 River stones in rapidly flowing water, trout stream shaded by trees; May-Sept.; 331	Seguy Friederichs Edwards Edwards Rivosecchi Smart Williams et al.	1925 1921 a 1920 1915 1961 1936 1961
<i>venustum</i> Say	---; ---; 92 Weedy rivers of moderate current; April, August; 98 Rivers with vegetation and moderate current; bites man; 109° ---; ---; 109, 300 Small river; May and Sept.; 272	Anonymous Edwards Grenier Puri Zahar	1944 d 1920 1953 1925 1951
<i>vittatum</i> Zetterstedt	---; ---; 141	Stone	1965
<i>vittatum</i> var. <i>delphinense</i> Zetterstedt	---; ---; 109	Villeneuve	1918
<i>wilhelmlandae</i> Smart	---; ---; 355	Smart	1944
<i>yerburyi</i> Edwards	In small temporary rills; April-May; 98, 272 ---; ---; 98, 272	Edwards et al. Davies	1939 1966
<i>setlandense</i> Davies	Rapid stony, peaty hill streams; July; 272	Davies	1966
<i>WILHELMIA</i> <i>annulitibia</i> Enderlein	Clear water, on stones, plants, paper, in shady forest; all year; 119	Wagner	1925
<i>balcanica</i> Enderlein	---; ---; 58	Enderlein	1924
<i>brinzenensis</i> Baranoff	---; July and Sept.; 333	Baranoff	1926 a

TABLE 1 - BLACK FLIES (conclusion)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>WILHELMIA</i> <i>dahlgreni</i> Enderlein	---; ---; 269	Enderlein	1920
<i>equina</i> (Linnaeus)	---; ---; 58 ---; ---; 92, 98, 109, 300 (Bites man)	Enderlein Ussova	1924 1961
	Clear water, on stones, plants, paper, in shady forest; all year; 119	Wagner	1925
<i>equina</i> var. <i>nigra</i> (Meigen)	---; ---; 119	Enderlein	1928
<i>equina</i> <i>prima</i> Baranoff	---; ---; 333	Baranoff	1926a
<i>equina</i> <i>quarta</i> Baranoff	Especially in larger waters; ---; 333	Baranoff	1926a
<i>equina</i> <i>secunda</i> Baranoff	Especially in larger waters; ---; 333	Baranoff	1926a
<i>equina</i> <i>tertia</i> Baranoff	Especially in larger waters; ---; 333	Baranoff	1926a
<i>falcata</i> (Enderlein)	---; ---; 58	Enderlein	1924
<i>jalcula</i> Enderlein	---; ---; 98, 119	Enderlein	1920
<i>lineata</i> (Meigen)	---; ---; 58	Enderlein	1924
<i>nigra</i> (Meigen)	---; edge of forests, July; 119	Enderlein	1921
<i>nigra</i> var. <i>aureoescens</i> Enderlein	---; edge of forests, July; 119	Enderlein	1921
<i>stylata</i> <i>prima</i> Baranoff	---; ---; 333	Baranoff	1926a
<i>stylata</i> <i>secunda</i> Baranoff	---; ---; 333	Baranoff	1926a
<i>wilhelmiata</i> Enderlein	---; ---; 119	Enderlein	1920

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C. SAND FLIES

The sand fly entries include a few species of Psychodinae which do not bite but may be pests of man, often causing allergic reactions. Little is to be found in the literature on the biologies and disease transmissions of these species. Most of the data are distributional records.

The tables include 42 species or subspecies most of which are in the large genus *Phlebotomus*.

TABLE 1 - SAND FLIES

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PHLEBOTOMUS alexandri</i> Sinton	---; ---; 87 ---; in houses; 125	Adler	1946
<i>ariasi</i> Tonneir	---; ---; 109°, 295 ---; in buildings, May-Nov.; 246	Parrot	1933
<i>azizi</i> Adler	---; ---; 87	Adler	1946
<i>bruchoni</i> Parrot	---; ---; 125 ---; ---, 333	Adler	1946
<i>caucasicus</i> Marzinovsky	---; ---; 333	Simit & Zhivkovit	1947
<i>chinensis</i> Newstead	---; enter houses, possible carrier of Kala-azar, common May-July; 87. ---; common; 125, 193, 278	Adler	1946
	---; occasionally in houses, bites man; 255°, 333°	Perfilev	1935
	---; ---; 333	Simic	1932
<i>chinensis</i> var. <i>longiductus</i> Nitzulescu	---; ---; 255	Nitzulescu	1931
<i>chinensis</i> var. <i>simici</i> Nitzulescu	---; common May-Nov.; 125, 341 ---; in houses; 125 ---; ---; 333	Adler	1946
<i>fallax</i> <i>cypriotica</i> Adler	---; common; 87	Adler	1946
<i>grassii</i> Pierantoni	---; walls of dwellings; 155	Pierantoni	1925
<i>langeroni</i> Nitzulescu	---; ---; 109	Perfilev	1935
<i>larroussei</i> Langeron & Nitzulescu	---; ---; 87, 125, 155 ---; bites during the day; 109° ---; ---; 109	Adler	1946
		Langeron & Nitzulescu	1931
		Durand- Delacre	1949

TABLE 1 - SAND FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PHLEBOTOMUS</i>			
<i>larrousei</i>			
<i>canaaniticus</i>			
Adler & Theodor	---; ---; 343	Theodor	1948
<i>legeri</i>	---; ---; 38	Pittaluga & de Buen	1918
Mansion	---; ---; 84	Mansion	1913
<i>longeroni</i>			
<i>longicuspis</i>	---; ---; 109	Perfilev	1935
Nitzulescu			
<i>lusutanicus</i>	---; June-Aug.; 246	Franca	1918
Franca			
<i>macedonicus</i>	---; ---; 125, 140, 333	Perfilev	1935
Adler & Theodor	---; among stalks of hemp, abundant immediately after rain, readily enters houses, April-Sept.; 155°	Nitzulescu & Nitzulescu	1933
	---; ---; 357	Galliard	1933
<i>major</i>	---; ---; 6°, 333°	Perfilev	1935
Annandale	---; ---; 6	Anonymous	1944
	---; vector of <i>Leishmania donovani</i> ; 125*	Geigy & Herbig	1955
	---; vector of Kala-azar; 125*	Anonymous	1944 c
	---; in houses; 125	Hertig	1949
	---; ---; 125, 341 (Enters houses, common carrier of Kala-azar)	Adler	1946
	Old walls, debris and cracks in beaten earth; preferably on face, neck and arms, readily bites man, numerous outside of houses by day; 155°	Jerace	1939
	---; probable vector of visceral leishmaniasis; 278	Anonymous	1945 a
	---; enters houses; 333	Guelmino & Jevtic	1955
	---; ---; 333*	Anonymous	1944 d
	---; ---; 336	Nitzulescu	1930

TABLE 1 - SAND FLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GÉNÉRAL STATEMENTS)	AUTHOR	DATE
<i>PHLEBOTOMUS</i>			
<i>major</i>			
<i>griseus</i>	---; ---; 343	Theodor	1948
Annandale			
<i>major</i>	---; ---; 109	Adler & Theodor	1929
<i>perniciosus</i>	---; bites man outdoors, May-Sept.; 333°	Simic	1928
Newstead			
<i>mascitti</i>	---; ---; 155	Larrousse	1921
Grassi			
<i>minutus</i>	---; ---; 38	Pittaluga & de Buen	1913
Rondani	---; ---; 58 (Occurs in warm areas, in cracks and crannies in soil, old ruinous walls, piles of rubbish and between boards of privies and cess pools, bites by night, cause sandfly fever)	Anonymous	1944 b
	---; ---; 98°	Whittingham & Rook	1923
	---; July-Sept.; 109	Pringault	1920
	---; in houses; 125	Cardamatis	1931
	---; ---; 155	Hertig & Fisher	1945
	Rubble walls and bastions; in houses; 193	Marett	1915
	---; ---; 193, 295	Seguy	1925
	---; in buildings, July-Nov.; 246	de Azevedo	1946
	---; ---; 333	Anonymous	1944 d
	---; ---; 357	Waterston	1922
<i>minutus</i>			
<i>meridionalis</i>	---; walls of dwellings; 155	Pierantoni	1925
Pierantoni			
<i>neglectus</i>	---; ---; 6, 333	Nitzulescu	1930
Tonnoir			
<i>papatasii</i>	---; ---; 6	Anonymous	1944
Scopoli	---; ---; 38	Najera Angulo	1937

TABLE 1 - SAND FLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PHLEBOTOMUS papatasii</i> Scopoli (cont.)	---; ---; 58 (In cracks and crannies, in soil, old ruinous walls, piles of rubbish and between boards of privies and cesspools, bites by night, vecto. of sandfly fever)	Anonymous	1944b
	---; vector of leishmaniasis, also responsible for the transmission of pappataci fever; 84**°	Anonymous	1944 e
	---; in and near houses, caves and stables, common, Aug.-Sept.; 87	Adler	1946
	Loose soil at base of walls and buildings; ---; 98*°	Whittingham & Rook	1923
	Ditch of manure; ---; 109	Legendre	1916
	---; Oct.; 109	Pringault	1920
	---; July; 109	Langeron	1916
	---; ---; 109*	Cesari	1928
	Under loose stones, gullies and drains; bites man persistently; 125*°	Lambert	1918
	---; around lights in huts; 125	Waterston	1918
	---; in houses, Apr.-Dec.; 125	Cardamitis	1929
	Old masonry, dilapidated houses, and debris; suspected vector of cutaneous leishmaniasis, vector of pappataci fever; 155*	Anonymous	1945 a
	---; abundant, experimentally infected with <i>Leishmania infantum</i> ; 155	Adler & Theodor	1931
	---; in houses; 155	Hertig & Fisher	1955
	---; abundant; 155	Hargreaves	1923
	Caves and embankments; in houses, May-Dec.; 193	Marett	1915
	---; ---; 246, 295, 301	Larrouse	1921
	---; vector of pappataci fever; 255*°	Anonymous	1944a
	---; in houses; 269	Hertig	1949
	---; March-Oct.; 278	d'Alessandro et al.	1947

TABLE I - SAND FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PHLEBOTOMUS papatasii</i> Scopoli (cont.)	Rubbish; ---; 295	Najera Angulo	1946
	---; in houses; 301	Gashen	1945
	---; bites indoors at night and rarely by day; 333°	Simic	1928
	---; in houses, suspected vector of Sandfly fever, May-Sept.; 333°	Simic	1930
	---; ---; 333*	Simit & Zhivkovit	1956
	---; ---; 333**	Anonymous	1944 d
	---; in houses; 343*	Higgins	1916
	---; ---; 357*	Waterston	1922
<i>parroti</i> Adler & Theodor	---; ---; 87	Adler	1946
	---; ---; 109	Langeron & Nitzulescu	1932
	---; ---; 125	Papadakis	1936
	---; along coasts; 155	Sacca	1939
	---; ---; 295	Najera Angulo	1935
	---; June-Aug.; 301	Gashen	1945
<i>parroti italicus</i> Adler & Theodor	---; ---; 38, 295	Najera Angulo	1937
	---; in houses; 125	Caminopetros	1934
	---; common; 125, 193	Adler	1946
	---; ---; 155, 278	Adler & Theodor	1931
<i>parroti sardous</i> Bogliolo	---; ---; 155	Anonymous	1945 a
	---; ---; 269	Bogliolo	1935
<i>perfiliewi</i> Parrot	---; rare; 87	Adler	1946
	---; in houses; 125, 155. ---; in cave; 269	Hertig	1949
	---; ---; 125	Anonymous	1944 c
	---; possible vector of leishmaniasis; 140	Anonymous	1945
	---; vector of <i>Leishmania tropica</i> ; 155*	Geigy & Herbig	1955

TABLE 1 - SAND FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PHLEBOTOMUS</i> <i>perfiliewi</i> Parrot (cont.)	---; ---; 155*	Vanni	1938
	---; enters houses; 333	Guelmino & Jevtic	1955
	---; ---; 333	Anonymous	1944 d
<i>perniciosus</i> Newstead	---; ---; 6, 193*	Newstead	1914
	---; ---; 38, 295	Najera Angulo	1937
	---; ---; 58 (In cracks and crannies in soil, old ruinous walls, piles of rubbish and between boards of privies and cesspools, bites by night, vector of sandfly fever)	Anonymous	1944 b
	---; vector of <i>Leishmania donovani</i> which causes Kala-azar, readily bites man; 84°*	Anonymous	1944 e
	---; probable vector of visceral leishmaniasis; 84	Chambost & Houdemer	1947
	---; possibly transmits visceral leishmaniasis; 109	Rossi	1935
	---; bites man indoors at night; 109°	LeGac	1936
	---; July-Sept.; 109. ---; ---; 278	Raynal & LeGac	1933
	Stagnant streams; ---; 125	Cardamatis	1931
	---; ---; 155	Anonymous	1945 a
	Rubble walls and bastions; in houses, May-Dec.; 193	Marett	1915
	---; in buildings; 246	de Azevedo	1946
	---; ---; 246°	de Azevedo & Teixera	1946
	---; caves; 269	Hertig	1949
	---; in corners or cracks, feeds mainly in early evening; 278°	Adler & Theodor	1931
	Rubbish; ---; 295	Najera Angulo	1946
	---; July-Aug.; 301	Gashen	1945
	---; rarely enter houses to bite man, June-Sept.; 333	Simic	1930

TABLE 1 - SAND FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PHLEBOTOMUS perniciosus</i> Newstead (cont.)	In latrines; abundant in evening, at light trap, common, vector of sandfly fever, June-Oct.; 357*	Waterston	1922
<i>perniciosus legeri</i> (Mansion)	---; ---; 84, 155	Nicoli	1953
<i>perniciosus</i> var. <i>longiductus</i> Parrot	---; ---; 255	Nitzulescu	1929
<i>perniciosus</i> var. <i>nigerrimus</i> Newstead	---; ---; 193	Newstead	1914
<i>perniciosus</i> var. <i>nitzulescui</i> Simic	---; ---; 333	Simic	1932
<i>perniciosus</i> <i>tobbi</i> Adler, Theodor & Lourie	---; ---; 125 ---; ---; 295 ---; ---; 333	Caminopetros	1934
<i>perniciosus</i> var. <i>tobbi</i> Adler, Theodor & Lourie	---; enters houses, experimentally infected with <i>Leishmania infantum</i> and carrier of Kala-azar, common Aug.-Sept.; 87. ---; ---; 125, 278. ---; common during still evening, Aug.-Sept.; 193	Adler	1946
<i>sergenti</i> Parrot	---; ---; 58 (In cracks and crannies in soil, old ruinous walls, piles of rubbish and between boards of privies and cesspools, bites by night, vector of sandfly fever) ---; ---; 87 ---; enters houses; 109. ---; ---; 246, 295 ---; July-Sept.; 109 Stagnant streams; in houses, Sept.; 125 ---; ---; 125* ---; in buildings; 246 ---; ---; 278 ---; ---; 333	Anonymous	1944 b
		Adler	1946
		Larreusse	1921
		Pringault	1920
		Cardamatis	1931
		Geigy & Herbig	1955
		de Azevedo	1946
		Adler & Theodor	1931
		Simit & Zhikovit	1956

TABLE 1 - SAND FLIES (conclusion)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PHLEBOTOMUS</i> <i>sergenti</i> var. <i>alexandri</i> Sinton	---; ---; 125	Papadakis	1936
<i>tobbi</i> Adler & Theodor	---; in houses; 125 ---; ---; 333	Hertig Simit & Zhikovit	1949 1956
<i>vesuvianus</i> Adler & Theodor	---; ---; 125 ---; ---; 155 ---; ---; 278	Anonymous Anonymous Adler & Theodor	1944 c 1945 a 1931
<i>PSYCHODA</i> <i>alternata</i> Say	Wet and foul sewage filters; ---; 98°	Satchell	1947
<i>cinerea</i> Banks	Sewage drains, water trough containing algae, mud flats and bacteria beds; ---; 98°	Satchell	1947

TABLE 2 - SUMMARY OF DISEASES OR DISEASE ORGANISMS TRANSMITTED BY
SAND FLIES

SPECIES	DISEASE ORGANISM				DISTRIBUTION
	VIRUS & PICKETTSIA	PROTOZOA	HELMINTHS	OTHER	
<i>PHLEBOTOMUS</i> <i>major</i> Annandale		<i>Leishmania</i> <i>donovani</i>			125
		Kala-azar			125 (Anonymous 1944)
		Kala-azar			333
<i>papatasi</i> Scopeli	Pappataci fever	Leishmaniasis			84
	Sandfly fever				98
		Oriental sore			109
	Sandfly fever				125
	Pappataci fever				155
	Pappataci fever				255
	Sandfly fever	Oriental sore			333
		Kala-azar			333 (Anonymous 1944)
	Sandfly fever				343
	Sandfly fever				357
<i>perfiliewi</i> Parrot		<i>Leishmania</i> <i>tropica</i>			155
		Cutaneous leishmaniasis			155 (Vanni 1938)
<i>permicosus</i> Newstead		<i>Leishmania</i> <i>donovani</i>			84
	Sandfly fever				193
	Sandfly fever				357
<i>argentii</i> Parrot		<i>Leishmania</i> <i>tropica</i>			125

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D. MIDGES

The midges include representatives of the family Ceratopogonidae. In some areas the biting species, especially *Culicoides*, are called "sand flies". Little is known of the biology of individual species; however, the larvae are known to occur either in water or in most terrestrial environments. In addition to their importance as pests, these biting midges are vectors of several disease organisms in some areas.

The tables include 115 species or subspecies, most of which are in the large genus *Culicoides*.

TABLE I - MIDGE

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES</i>			
<i>accraensis</i> Carter, Ingram & Macfie	---; ---; 109. Tree holes; ---; 155	Kremer	1965
<i>achrayi</i> Kettle & Lawson	Mud; ---; 109. ---; ---; 244, 272	Kremer	1965
<i>agathensis</i> Callot, Kremer & Rioux	---; ---; 109	Kremer	1965
<i>albicans</i> Winnertz	---; ---; 34, 98, 119, 140 Trenches, pools; ---; 45 ---; common, April-June; 45 ---; ---; 109 Marsh, bogland; ---; 272	Kieffar Goetghebuer Goetghebuer Kremer Kettle & Lawson	1925 1936 1920 1965 1952
	---; ---; 272	Edwards et al.	1939
<i>albipennis</i> Kieffer	---; ---; 109	Vargas	1949
<i>amoenus</i> Winnertz	---; May, Aug., Sept.; 45	Goetghebuer	1920
<i>arcuatus</i> Winnertz	Stagnant alkaline water; ---; 45 ---; in hilly districts; 98°	Goetghebuer Edwards	1936 1926
<i>aricola</i> Kieffer	---; ---; 34	Vargas	1949
<i>belgicus</i> Kieffer	---; ---; 45	Kremer	1965
<i>bequetti</i> Clastrier	Mud contained in tree holes; ---; 109. ---; ---; 155	Kremer	1965
<i>bromophilus</i> Kieffer	---; ---; 34	Vargas	1949
<i>brownicans</i> Edwards	Small stream; ---; 98° ---; ---; 98, 109	Edwards et al. Kremer	1939 1965

TABLE 1 - MIDGES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES</i>			
<i>cameroni</i> Campbell & Peihain- Clinton	---; ---; 98, 124	Kremer	1965
<i>carjalaensis</i> Gluchova	---; ---; 109	Kremer	1965
<i>cutaneiz</i> Clastrier	---; ---; 109, 155	Kremer	1965
<i>chiopterus</i> Meigen	---; ---; 34, 119 Trenches, pools; ---; 45	Kieffer	1925
	Sap running from wounds in elm trees; ---; 98	Goetghebuer	1936
	Cow dung; ---; 98, 272	Edwards et al.	1939
	Cow dung; ---; 109	Kettle & Lawson	1952
	---; ---; 336 -	Kremer	1965
<i>circumscriptus</i> Kieffer	---; ---; 45 Mud devoid of vascular vegetation, near brackish water; ---; 98	Goetghebuer	1933
	---; common; 98. Salty mud; ---; 109. ---; ---; 155	Kettie & Lawson	1952
	---; ---; 331	Kremer	1965
	---; ---; 336	Edwards et al.	1939
<i>citrinellus</i> Kieffer	---; ---; 109	Gutzevich	1960
<i>clastriieri</i> Callot, Kremer & Deduit	Mud at edge of swamps; ---; 109	Kremer	1965
<i>crassiforceps</i> Kieffer	---; May; 119	Goetghebuer	1935a
<i>cubitalis</i> Edwards	---; ---; 88, 98, 109, 119, 155 Marshy ground, muddy swamps; ---; 272	Kremer	1965
	Acid grassland; ---; 272	Kettle & Lawson	1952
		Kettle	1961

TABLE I - MIDGEES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES cunctans</i> Winnertz	---; ---; 34, 119	Kieffer	1925
	---; ---; 45	Goetghebuer	1933
	---; ---; 98	Edwards et al.	1939
	Marshy areas; ---; 272	Kettle & Lawson	1952
	---; ---; 301	Kremer & Callot	1961
<i>delta</i> Edwards	---; ---; 98, 109, 124, 301	Kremer	1965
	Wet areas of moorland; ---; 272	Kettle & Lawson	1952
	---; ---; 272	Edwards et al.	1939
<i>derisor</i> Callot & Kremer	---; ---; 109	Kremer	1965
<i>dewulfi</i> Goetghebuer	---; ---; 45, 272	Gutzevich	1960
	---; ---; 98, 124. Cow dung; ---; 109	Kremer	1965
<i>dileucus</i> Kieffer	---; ---; 109	Kieffer	1925
<i>drenski</i> von Zilahi	---; ---; 58	Vargas	1949
<i>duddingstoni</i> Kettle & Lawson	---; ---; 98. Water-covered mud at edge of pool; ---; 109	Kremer	1965
<i>edwardsi</i> Goetghebuer	---; ---; 45	Kieffer	1925
<i>fagineus</i> Edwards	---; ---; 98, 124, 155, 301. Tree holes; ---; 109	Kremer	1965
<i>fuscipennis</i> (Staeger)	Trenches, pools; ---; 45 ---; occasionally bites man; 45° ---; ---; 98 Swamp edge; ---; 109. ---; ---; 244 Mud among semi-aquatic plants; ---; 272	Goetghebuer Goetghebuer Edwards et al. Kremer Kettle & Lawson	1936 1919 1939 1965 1952

TABLE 1 - MIDGEs (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES</i> <i>fossicola</i> Kieffer	---; ---; 119	Vargas	1949
<i>furcillatus</i> Callot, Kremer & Paradis	Mud; ---; 109	Kremer	1965
<i>gejgelensis</i> Dzhafarov	---; ---; 155	Kremer	1965
<i>griseocens</i> Edwards	---; ---; 98, 301. Peat-bog; ---; 109 ---; ---; 124	Kremer	1965
	Marshy areas with <i>Carex</i> sp.; ---; 272	Kettle & Lawson	1952
	---; ---; 301	Kremer & Callot	1961
<i>guineenensis</i> Kieffer	---; ---; 109	Vargas	1949
<i>guttularis</i> Kieffer	---; ---; 124, 140	Austen	1925
<i>halophilus</i> Kieffer	Shallow, muddy, brackish pools; ---; 98. Shallow, muddy, brackish pools and muddy salt flats; ---; 272°	Kettle & Lawson	1952
	Salty grounds; ---; 109. Salty marshes; ---, 119. ---; common; 124. ---; ---; 155	Kremer	1965
	---; ---; 140, 336	Gutzevich	1960
	---; most numerous in muggy, quiet weather, July; 228°	Anonymous	1944
	---; ---; 228	Vargas	1949
	---; ---; 272, 331	Edwards et al	1939
<i>haranti</i> Rioix, Descous & Pecla	---; ---; 109, 155	Kremer	1965

TABLE 1 - MIDGEES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES helophilus</i> Edwards	---; active midday; 98°. ---; ---; 152 ---; ---; 98, 109 ---; ---; 124 In <i>Sphagnum</i> spp.; ---; 272 Acid grassland; ---; 272 Boggy moorland; ---; 272° ---; June-July; 272	Edwards et al. Kremer Vargas Kettle & Lawson Kettle Cameron Parker	1939 1965 1949 1952 1961 1946 1949
<i>helveticus</i> Callot, Kremer & Deduit	---; ---; 109. Mud surrounding animal burrows; ---; 301	Kremer	1965
<i>heteroditus</i> Kremer & Callot	---; ---; 109, 155	Kremer	1965
<i>hydas</i> Macfie	---; ---; 124	Vargas	1949
<i>ibericus</i> Dzhafarov	---; ---; 155	Kremer	1965
<i>impunctatus</i> Goetghebuer	Acid waters with vegetation; ---; 45 ---; may bite man; 45 ---; ---; 98, 124°, 244, 301. Swampy prairies; rare; 109 ---; ---; 98°, 272°, 331° (Water-logged soil of peaty nature, active afternoon and evening, bites at night in sultry weather) ---; ---; 119 ---; June-Aug.; 272 ---; ---; 336	Goetghebuer Anonymous Kremer Edwards et al. Kieffer Parker Gutzevich	1936 1944a 1965 1939 1925 1949 1960
<i>jurensis</i> Callot, Kremer & Deduit	Mud; ---; 109	Kremer	1965
<i>lacteinervis</i> Kieffer	---; ---; 109	Kieffer	1925

TABLE 1 - MIDGEES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES</i> <i>latipennis</i> Kieffer	---; ---; 140	Kremer	1965
<i>longipennis</i> Khala	---; ---; 109	Kremer	1965
<i>lupicaris</i> Downes & Kettle	---; ---; 98, 124, 301. Mud; ---; 109 Muddy swamps without vegetation; ---; 272	Kremer Kettle & Lawson	1965 1952
<i>machardyi</i> Campbell & Pelhain-Clinton	---; ---; 98, 124, 272	Kremer	1965
<i>maritimus</i> Kieffer	---; ---; 45°, 109° Small, shallow, open, brackish pools with decaying vegetation; ---; 98. Salt marsh with <i>Scirpus</i> <i>maritimus</i> ; ---; 272	Kremer Kettle & Lawson	1965 1952
	Alkaline reservoir; ---; 98	Gutzevich	1960
	Salt water; ---; 98°	Edwards et al.	1939
<i>maritimus</i> <i>paucisensillatus</i> Callot, Kremer & Rioux	---; ---; 109	Kremer	1965
<i>mayeri</i> Goetghebuer	---; ---; 119	Goetghebuer	1935
<i>minutissimus</i> Zetterstedt	---; ---; 45 ---; ---; 98, 109	Goetghebuer Kremer	1933 1965
	---; common; 124	Edwards	1926
	---; ---; 336	Wirth	1965
<i>muscicola</i> Kieffer	In damp moss; ---; 109	Kieffer	1925
<i>musilator</i> Kremer & Callot	Edge of canal or stream; ---; 109	Kremer	1965
<i>nanulus</i> Kieffer	---; ---; 140	Kremer	1965

TABLE 1 - MIDGEES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES neglectus</i> Winnertz	---; ---; 34, 98, 119 Stagnant alkaline water; ---; 45	Kieffer Goetghebuer	1925 1936
<i>neglectus</i> var. <i>albihalteratus</i> Goetghebuer	---; ---; 45	Goetghebuer	1935
<i>nigrosignatus</i> Kieffer	---; ---; 109	Kremer	1965
<i>nubeculosus</i> Meigen	Trenches, pools; ---; 45 Stagnant water with green slime and decaying organic matter, liquid farm manure; ---; 98 ---; bite painful; 98° Dung water; bite extremely painful; 109°, 336° ---; ---; 125, 272, 331	Goetghebuer Edwards et al. Kremer Austen	1936 1939 1965 1925
<i>nubeculosus</i> Form A Meigen	Muddy hoofprints near farmyards; ---; 272	Kettle & Lawson	1952
<i>nubeculosus</i> Form B Meigen	Wet mud with blue-green algae; ---; 272	Kettle & Lawson	1952
<i>obsoletus</i> (Meigen)	---; ---; 34, 109, 119, 136 Trenches, pools; ---; 45 ---; ---; 45° ---; ---; 84° ---; ---; 84, 244 Marshy soils, tree holes, ditches; May-Oct.; 98 Damp debris, from a tree hole, sheep dung, moist decaying vegetable matter; June, Sept.-Oct.; 98 Dry decaying fungi, sheep dung; ---; 98° ---; ---; 109° Moorland sites, marshes; ---; 272 Acid grassland; ---; 274	Kieffer Goetghebuer Goetghebuer Edwards Kremer Hill Edwards et al. Edwards Roman Kettle & Lawson Kettle	1925 1936 1923 1928 1965 1947 1939 1926 1941 1952 1961

TABLE 1 - MIDGEES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES obsoletus</i> (Meigen) (cont.)	Boggy moorland; ---; 272° ---; ---; 301° ---; ---; 336	Cameron Kremer & Callot Wirth	1946 1961 1965
<i>odiatus</i> Austen	---; ---; 98 ---; ---; 124	Edwards et al. Kremer	1939 1965
<i>odibilis</i> Austen	Trenches, pools; ---; 45 Swampy grounds with little vegetation and large expanses of open mud; ---; 98 Mud at margin of cattle pond; common, May-August; 98 ---; ---; 109° ---; ---; 336 (Bites man)	Goetghebuer Kettle & Lawson Edwards et al. Kremer Gutzevich	1936 1952 1939 1965 1960
<i>pallidicornis</i> Kieffer	---; ---; 98, 331° Swampy prairies; ---; 109. ---; ---; 244, 301 ---; ---; 140 Marshy grounds; ---; 272 Boggy moorland; ---; 272° ---; June-Sept.; 272	Edwards et al. Kremer Vargas Kettle & Lawson Cameron Parker	1939 1965 1949 1952 1946 1949
<i>parroti</i> Kieffer	Floating green algae in ponds; rare, May; 98 ---; ---; 155, 336 Small ponds with green algae; ---; 343	Edwards et al. Kremer Gutzevich	1939 1965 1960
<i>perpungens</i> Kieffer	---; bites man outdoors; 109° ---; ---; 109	Mandoul Kieffer	1926 1925
<i>photophilus</i> Kieffer	---; ---; 119	Vargas	1949

TABLE 1 - MIDGES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES pictipennis</i> (Staeger)	Stagnant alkaline water; ---; 45 ---; June-August; 45 Woodland pool; April-June; 98 Swamps; ---; 109 Marshy areas; ---; 272 ---; ---; 336 (Bites man)	Goetghebuer Goetghebuer Edwards et al. Kremer Kettle & Lawson Gutzevich	1936 1920 1939 1965 1952 1960
<i>picturatus</i> Kremer & Deduit	---; ---; 109	Kremer	1965
<i>poperinghensis</i> Goetghebuer	---; ---; 45, 98, 124	Kremer	1965
<i>pseudochiopterus</i> Downs & Kettle	Cow dung; ---; 98, 272	Kettle & Lawson	1952
<i>pseudoheliophilus</i> Callot & Kremer	---; ---; 109	Kremer	1965
<i>pulicaris</i> (Linnaeus)	Damp and marshy areas, stagnant water of ditches and pools; bites man, May, Aug.; 45° ---; May-October; 45 ---; ---; 84°, 98, 244°. Mud bordering streams and ponds; ---; 109° Among green algae, active in midday, afternoon and evening; 124° Aquatic, usually among green algae; common; 272 Boggy moorland; ---; 272° Marshes and muddy swamps; ---; 272 ---; May-Oct.; 272 ---; ---; 300 Tree holes; in forest, May; 301° ---; in garden; 301	Goetghebuer Goetghebuer Kremer Edwards et al. Edwards Cameron Kettle & Lawson Parker Anonymous Galli-Valerio Galli-Valerio	1919 1920 1965 1939 1926 1946 1952 1949 1944b 1917 1925

TABLE 1 - MIDGEES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES pulicaris</i> var. <i>setosinervis</i> Kieffer	---; ---; 109, 119	Kremer	1965
<i>pumilus</i> Winnertz	---; ---; 34, 45, 119, 136	Kieffer	1925
	---; occasionally bites man; 45°	Goetghebuer	1919
	---; ---; 98	Edwards et al.	1939
	---; probably aggressive; 109	Kremer	1965
	---; ---; 109°	Roman	1941
	---; ---; 336	Gutzevich	1960
<i>punctaticollis</i> (Becker)	---; ---; 45	Goetghebuer	1920
	---; ---; 98	Kremer	1965
<i>punctatus</i> (Meigen)	---; ---; 98, 109, 301	Kremer	1965
	Marshes and muddy swamps; ---; 272	Kettle & Lawson	1952
<i>punctatus</i> sensu Downes & Kettle	---; ---; 109	Kremer	1965
<i>puncticeps</i> Goetghebuer & Lenz	---; ---; 34	Vargas	1949
<i>puncticollis</i> Becker	---; ---; 125, 155	Kremer	1965
	---; ---; 343	Gutzevich	1960
<i>quinquefasciatus</i> Goetghebuer	---; ---; 45	Kieffer	1925
<i>reconditus</i> Campbell & Pelhain-Clinton	---; ---; 98, 109, 301	Kremer	1965
<i>riethi</i> Kieffer	Salt water on muddy margins of tidal creeks and pools; April; 98	Edwards et al.	1931
	Salty soil; light trap; 109	Kremer	1965
<i>riouxi</i> Callot & Kremer	---; light trap; 109	Kremer	1965

TABLE 1 - MIDGEES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES</i>			
<i>rivicola</i> Kieffer	---; ---; 109	Kieffer	1925
<i>salicola</i> Kieffer	---; ---; 228° (Common in muggy, quiet weather, July)	Anonymous	1944
<i>salinarius</i> Kieffer	---; alkaline reservoirs; 45 ---; ---; 98	Gutzevich	1960
	---; common; 98. Salty mud; ---; 109	Edwards et al.	1939
	---; ---; 124	Kremer	1965
	Mud-covered salt flats; ---; 272	Vargas	1949
		Kettle & Lawson	1952
<i>sanguisugus</i> Coquillet	---; ---; 109	Kremer	1965
<i>scoticus</i> Downes & Kettle	---; ---; 98, 124, 155, 244. Mud of ruts; rare; 109 ---; ---; 272	Gutzevich	1960
<i>segnis</i> Campbell & Pelhain-Clinton	---; ---; 98. Swampy land; light trap; 109	Kremer	1965
<i>setiger</i> Goetghebuer	---; ---; 45	Vargas	1949
<i>setosinervis</i> Kieffer	Sphagnum pools; ---; 45 ---; ---; 109, 119	Goetghebuer	1936
<i>setosus</i> Gutzevich	---; ---; 109	Kieffer	1925
<i>similis</i> Carter, Ingram & Macfie	---; ---; 155	Kremer	1965
<i>simulator</i> Edwards	Mud-lined, shallow pools in waterlogged hayfield; ---; 98 ---; ---; 98,	Kettle & Lawson	1952
<i>sphagnensis</i> var. <i>vagesicus</i> Kremer & Callot	---; ---; 109	Kremer	1965

TABLE 1 - MIDGES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES</i> <i>stigma</i> (Meigen)	---; ---; 45, 119	Kieffer	1925
	Among floating green algae in ponds; bites man at sunset, rare, May-June, Sept.; 98°	Edwards et al.	1939
	---; ---; 98, 109, 124, 336	Kremer	1965
	Mud; ---; 272	Kettle & Lawson	1952
<i>stigmoides</i> Callot, Kremer & Deduit	Bogs, ruts, mud; ---; 109	Kremer	1965
<i>subfascipennis</i> Kieffer	Pools, trenches, stagnant alkaline water; ---; 45	Goetghebuer	1936
	---; may bite man; 45	Anonymous	1944a
	---; ---; 140	Kremer	1965
<i>subfascipennis</i> var. <i>analis</i> Kieffer	---; ---; 45	Kieffer	1925
	---; ---; 45°, 155°, 244°. Humid prairies; ---; 109°	Kremer	1965
<i>sussae</i> Kieffer	---; ---; 140, 155	Kremer	1965
<i>sylvarum</i> Callot & Kremer	---; ---; 109	Kremer	1965
<i>truncorum</i> Edwards	Damp rotten wood; ---; 98	Edwards et al.	1939
	Swamps; ---; 109	Kremer	1965
	---; ---; 124	Vargas	1949
	Bogland sites dominated by <i>Sphagnum</i> spp.; ---; 272	Kettle & Lawson	1952
	Wet hillside; ---; 272	Kettle	1961
<i>unimaculatus</i> Goetghebuer	---; ---; 45	Goetghebuer	1920
<i>varius</i> (Winnertz)	---; occasionally bites man; 45°	Goetghebuer	1919

TABLE 1 - MIDGEES (conclusion)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CULICOIDES vexans</i> (Staeger)	---; in houses; 92°. Damp earth around bushes; bite painful; 98°. ---; ---; 331	Edwards et al.	1939
	---; ---; 92	Vargas	1949
	Mud-lined shallow pools in waterlogged hayfield; May; 54	Kettle & Lawson	1952
	---; ---; 98, 109°, 301°	Kremer	1965
	---; ---; 98, 336 (Attacks man)	Gutzevich	1960
<i>HELEA brunnides</i>	---; ---; 300°	Anonymous	1944b
	---; ---; 300°	Anonymous	1944b
<i>LEPTOCONOPS bezzii</i> Noe	---; May-Sept.; 155°	Carter	1921
	---; ---; 343	Carter	1921
	---; ---; 109	Roman	1937
	---; May-Sept.; 155°. ---; ---; 269	Carter	1921
	---; ---; 343	Gutzevich	1960

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E. HORSE FLIES

The entries for horse flies (Tabanidae) include very little biology. Most of the literature on this large and important group is concerned with taxonomy, a lesser amount on distribution and none on disease transmission to man.

The synonymy, both at the genus and species level, is very complex. Several specialists are currently striving to straighten out some of these problems.

In the tables are listed 379 species or subspecies, but it is certain that many of these are not valid names.

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ATYLOTUS</i> <i>hadjinicolaoui</i> Kröber	---; ---; 125	Sautet	1938
<i>lasiotis</i> Surcouf	---; ---; 125, 155, 301	Surcouf	1924
<i>latistriatis</i> Brauer	Coastal salt marshes; ---; 98	Goffe	1931
	---; ---; 295	Arias	1914
<i>lunatus</i> Fabricius	---; July; 109	Seguy	1926
	---; ---; 119, 125, 140, 155, 278, 295, 333	Kröber	1924
<i>lunatus</i> <i>farinosus</i> Szilady	---; ---; 108	Kröber	1925
<i>lunatus</i> <i>rufus</i> Szilady	---; ---; 125, 155, 333	Kröber	1925
<i>nemoralis</i> Meigen	---; ---; 84, 278, 295, 301, 333, 356	Kröber	1924
	---; July; 109	Seguy	1926
<i>plebejus</i> Fallen	---; ---; 45, 109	Seguy	1926
	---; ---; 88	Anonymous	1944h
	---; ---; 98	Goffe	1931
<i>plebejus</i> <i>aethereus</i> Bigot	---; ---; 34, 119	Goffe	1931
<i>pucillus</i> Egger	---; ---; 125, 155	Kröber	1924
<i>quatuornotatus</i> Meigen	---; ---; 34, 45, 58, 88, 109, 119, 125, 140, 155, 278, 295, 333, 356	Kröber	1924
	---; rare; 301	Bouvier	1940a
<i>rusticus</i> Linnaeus	---; ---; 88	Anonymous	1944h
	---; ---; 92, 98	Goffe	1931
<i>tomentosus</i> Macquart	---; ---; 109	Seguy	1926
	---; ---; 155	Kröber	1924
<i>tricolor</i> Zeller	---; ---; 278	Kröber	1924

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ATYLOTUS</i> <i>umbrinus</i> Hoffmannsegg	---; ---; 34, 58, 255, 333, 356 ---; ---; 109, 125, 155, 278	Kröber Surcouf	1924 1924
<i>vittatus</i> Fabricius	---; ---; 295	Arias	1914
<i>CEPHENOMYIA</i> <i>stimulator</i> Clark	---; ---; 119, 301	Bouvier	1947
<i>CHRYSOPS</i> <i>aurantiacus</i> Jaennicke	---; ---; 295	Arias	1914
<i>beckeri</i> Kröber	---; ---; 125	Shannon & Hadjinicolaou	1936
<i>caecutiens</i> Linnaeus	---; very common and attack man viciously; 34° ---; ---; 34, 45, 92, 108, 140, 155, 278, 295, 300, 301, 341, 355 ---; ---; 58, 125 ---; accused of transmitting <i>Filaria</i> <i>conjunctivae</i> ; 84 ---; ---; 88	Anonymous Kröber Shannon & Hadjinicolaou Anonymous Anonymous	1944 g 1939 1936 1944 i 1944 h
	In mud on the stream margins; May-Sept.; 98, 272. Amongst reeds in water margins; July; 109. In mud bordering a small sluggish streams fringed with tall trees; ---; 119	Edwards et al.	1939
	Marshes; ---; 98. ---; ---; 272 ---; May-Aug.; 109 ---; ---; 244 ---; May-Sept., near water, common; 301 ---; at 1592 m. altitude; 301°	Goffe Surcouf Anonymous Bouvier Galli-Valerio	1931 1924 1945 1945 1925
<i>caecutiens</i> var. <i>meridionalis</i> Strobl.	---; ---; 34, 109, 119, 125, 278 ---; ---; 58, 155 ---; frequent during very warm, humid days, on edge of ponds, in fields, on edges of woods; 109° ---; June-Sept.; 109. ---; ---; 295 ---; in warm places and under shade; 301	Kröber Kröber VanGaver & Timon-David Surcouf Bouvier	1920 1939 1928 1924 1945

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CHrysops</i>			
<i>caecutiens</i>			
var. <i>trifenestratus</i> Kröber	---; ---; 119, 278, 295	Kröber	1920
<i>concavus</i> Loew	---; ---; 34	Kröber	1925
<i>connexus</i> Loew	---; ---; 295	Kröber	1939
<i>discalis</i> Williston	---; ---; 300	Olin	1938
<i>divaricatus</i> Loew	---; ---; 108, 119, 244, 355	Kröber	1920
<i>flavipes</i> Meigen	---; ---; 58, 140	Kröber	1939
	---; ---; 88	Moucha & Chvala	1956
	---; May; 109	Seguy	1926
	---; ---; 125	Kröber	1920
<i>flavipes</i> var. <i>beckeri</i> Kröber	---; ---; 125	Kröber	1939
<i>flavipes</i> var. <i>punctifer</i> Loew	---; ---; 34, 58, 87, 109, 125, 140, 295, 333	Kröber	1939
<i>italicus</i> Meigen	---; ---; 6, 87, 119, 125, 155	Austen	1925
	---; ---; 34, 278, 295, 333	Kröber	1920
	---; ---; 58	Anonymous	1944c
	---; ---; 84. ---; Apr.-Aug.; 109	Seguy	1926
	---; ---; 140	Kröber	1922
<i>italicus</i> <i>nigriventris</i> Loew	---; ---; 34, 155	Kröber	1920
	---; ---; 125, 333	Anonymous	1944c
<i>lapponicus</i> Loew	---; ---; 92, 108, 355	Krober	1920
<i>marmoratus</i> Rossi	---; ---; 295	Codina	1921
<i>mauretanicus</i> Costa	---; ---; 155, 295	Kröber	1939

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CHrysops</i> <i>maurus</i> Siebke	---; ---; 98, 108, 119, 228, 358	Krober	1920
<i>Melanopleurus</i> Wahlberg	---; ---; 34	Surcouf	1924
	---; ---; 108, 119, 228, 355	Krober	1920
<i>melicharii</i> Mik.	---; ---; 34, 119, 155	Krober	1939
<i>nigripes</i> Zetterstedt	---; ---; 92, 108, 300, 355	Krober	1920
	---; ---; 358	Lichtwardt	1914
<i>nigripes</i> var. <i>lapponicus</i> Loew	---; ---; 108, 355	Krober	1939
<i>novus</i> Shiner	---; ---; 125	Krober	1920
	---; ---; 295	Shannon & Hadjinicolaou	1936
<i>parallelogramma</i> Loew	---; ---; 88	Anonymous	1944 h
<i>parallelogrammus</i> Zeller	---; ---; 34, 58, 88, 119, 140, 155, 244	Krober	1939
	---; June; 109	Seguy	1926
<i>perepicillaris</i> Loew	---; ---; 125	Waterston	1918
	---; numerous during summer and annoying; 155°	Hargreaves	1923
	---; ---; 295	Arias	1914
<i>pictus</i> Meigen	---; ---; 34, 98, 108, 119, 155. ---; July, rare; 301°	Bouvier	1945
	---; ---; 45, 109	Seguy	1926
	---; ---; 88°	Bouvier	1940 a
<i>punctifer</i> Loew	---; ---; 34, 100, 125, 140, 295, 333	Krober	1920
	---; ---; 58, 87	Shannon & Hadjinicolaou	1936
<i>quadrata</i> Meigen	---; ---; 88	Anonymous	1944 h
	---; ---; 92. In moist sand near water; common, June-Sept.; 98. ---; July; 272	Edwards et al.	1939
	---; ---; 125	Waterston	1918

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CHrysops quadratus</i> Meigen	---; very common, bites man viciously; 34° ---; ---; 34, 92, 98, 108, 109, 119, 140, 155, 295 ---; ---; 58, 125	Anonymous Kröber Shannon & Hadjinicolaou	1944g 1920 1936
<i>quadratus</i> var. <i>novus</i> Schiner	---; ---; 119, 140, 295	Kröber	1939
<i>relictata</i> Meigen	---; ---; 88	Anonymous	1944h
	Lake sand; ---; 92. Common around watery places on old heathlands; May-Sept.; 98, 152, 272. In small brook in a meadow; common; 119	Edwards et al.	1939
<i>relictus</i> Meigen	---; ---; 34, 92, 98, 108, 119, 301, 341, 355 ---; Aug.; 43, 109 ---; ---; 58	Krober Seguy	1920 1926
	---; ---; 88	Shannon & Hadjinicolaou	1936
	---; common; 136°	Landrock	1908
	---; ---; 152	Anonymous	1944 b
	---; ---; 272	Anonymous	1946
	---; ---; 295	Goffe	1931
		Codina	1921
<i>relictus</i> var. <i>melanopleurus</i> Wahlberg	---; ---; 108, 119, 300, 355	Kröber	1939
<i>rufipes</i> Meigen	---; ---; 34, 92, 108, 109, 119, 140, 155, 333 ---; Aug.; 45. ---; July, in pond and forest; 109	Kröber Seguy	1920 1926
	---; ---; 88	Anonymous	1944 h
<i>sepulcralis</i> Fabricius	---; ---; 45	Goetghebuer	1926
	---; ---; 88	Anonymous	1944 h
	---; ---; 92, 108, 119, 300, 355	Edwards et al.	1939
	Marshy places, small ponds, old heathlands; July-Sept.; 98	Goffe	1931
	---; ---; 98, 228	Kröber	1920
	---; rare; 301	Bouvier	1945

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CHrysops</i> <i>sepulcralis</i>			
var. <i>maurus</i> Siebke	---; ---; 98, 108, 119, 228	Kröber	1939
<i>singularis</i> Meigen	---; ---; 295	Kröber	1920
<i>vitripennis</i> Meigen	---; ---; 34, 58, 109, 155, 295	Kröber	1939
<i>CHrysozona</i> <i>belligera</i> Austen	---; ---; 125	Kröber	1939
<i>bigoti</i> Gobert	---; ---; 34	Kröber	1922
	---; ---; 58	Kröber	1939
	Coastal marshes; ---; 98	Goffe	1931
	---; ---; 109, 124, 155	Kröber	1925
<i>bigoti</i> var. <i>monspelliensis</i> Villeneuve	---; ---; 109, 119, 140, 155	Krober	1922
<i>bigoti</i> var. <i>ocelligera</i> Kröber	---; ---; 278	Kröber	1939
<i>crassicornis</i> Wahlberg	---; ---; 34, 88, 92, 109, 119, 155	Kröber	1922
	---; ---; 45	Goetghebuer	1926
	---; ---; 58, 108	Kröber	1939
	---; June-Aug.; 98, 272	Goffe	1931
	---; ---; 152	Anonymous	1946
	---; ---; 301	Bouvier	1940 a
<i>crassicornis</i> <i>tamerlani</i> Szilady	---; ---; 140	Goffe	1931
<i>csikii</i> Szilady	---; ---; 6, 34, 58, 255, 295	Kröber	1939
<i>gandasi</i> Kröber	---; ---; 357	Sautet	1938
<i>graeca</i> Szilady	---; ---; 125	Kröber	1925

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CHRYSOZONA</i> <i>grandis</i> Macquart	---; Aug.; 109	Surcouf	1924
<i>hirsutus</i> Villers	---; ---; 34, 301	Kröber	1925
<i>italica</i> Meigen	---; ---; 34, 88, 92, 109, 119, 155, 301 ---; ---; 45 ---; ---; 58 Salt marshes; ---; 98	Kröber Goetghebuer Dryenski Goffe	1922 1926 1931 1931
<i>italica</i> ver. <i>argyrophora</i> Kröber	---; ---; 125	Kröber	1925
<i>italica</i> var. <i>gallica</i> Szilady	In dry places, in woods during warm hours of day; July-Aug.; 109° ---; ---; 125, 155, 295	Van Gaver & Timon-David Kröber	1928 1939
<i>italica</i> var. <i>grandis</i> Macquart	---; ---; 58, 109, 119, 125, 140, 155	Kröber	1939
<i>italica</i> var. <i>nigricornis</i> Gobert	---; ---; 45 ---; ---; 98, 109, 155, 295 ---; ---; 125	Goetghebuer Goffe Kröber	1926 1931 1939
<i>italica</i> var. <i>variegata</i> Fabricius	---; ---; 45 ---; ---; 58, 125 ---; ---; 98 ---; ---; 109, 155	Goetghebuer Kröber Goffe Kröber	1926 1939 1931 1922
<i>lambi</i> Villeneuve	---; ---; 109, 295	Kröber	1925
<i>pallidula</i> Kröber	---; ---; 244	Kröber	1922
<i>pandazisi</i> Kröber	---; ---; 125	Kröber	1939
<i>planicornis</i> Kröber	---; ---; 109, 295	Kröber	1922

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CHRYSOZONA pluvialis</i> Linnaeus	---; ---; 34, 88, 92, 109, 119, 155, 300, 301 ---; ---; 45 ---; ---; 58 ---; mid-May to mid-Sept.: 98 ---; ---; 152	Kröber Goetghebuer Dryenski Goffe Anonymous	1922 1926 1931 1931 1946
<i>pluvialis hispanica</i> Szilady	---; ---; 98, 119, 155, 295	Kröber	1939
<i>pluvialis lusitanica</i> Guérin-Meneville	---; ---, 246, 295	Kröber	1925
<i>pluvialis pseudolusitanica</i> Szilady	---; ---; 246	Kröber	1939
<i>pluvialis subcylindrica</i> Pandelle	---; ---; 58 ---; ---; 109, 119, 301	Kröber	1939 1922
<i>pseudolusitanica</i> Szilady	---; ---; 246	Kröber	1925
<i>solstitialis</i>	---; ---; 152	Anonymous	1946
<i>DASYRRHAMPHIS anthracina</i> Meigen	---; ---; 84, 125, 155, 278 ---; May-June, Sept.; 109	Kröber Seguy	1939 1926
<i>ater</i> Rossi	---; ---, 34, 45, 109, 125, 155, 278, 295, 301, 333, 341, 356	Kröber	1939
<i>atra</i> Rossi	---; ---; 45, 84, 109	Seguy	1926
<i>DASYTIPIA agrestis</i> (Wiedemann)	---; ---; 109	Seguy	1926
<i>fulva</i> Meigen	---; common, July-Aug.; 109	Seguy	1926
<i>fulva</i> <i>flavifemur</i> Enderlein	---; ---; 109	Kröber	1925
<i>latistriata</i> Brauer	---; July; 109. ---; ---; 125, 295	Seguy	1926

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>DASYSTIPIA</i>			
<i>mallorcana</i> Enderlein	---; ---; 38	Kröber	1925
<i>nigrifacies</i> Gobert	---; July-Aug.; 109. ---; ---; 295	Seguy	1926
<i>rustica</i> Linnaeus	---; May-July; 109	Seguy	1926
<i>rustica</i> <i>nigra</i> Enderlein	---; ---; 357	Kröber	1925
<i>GLAUCOPS</i>			
<i>hirsutus</i> Villers	---; ---; 34, 119	Kröber	1939
	---; July; 301	Seguy	1926
<i>HAEMATOPOTA</i>			
<i>belligera</i> Austen	---; ---; 125	Shannon & Hadjinicolaou	1936
<i>bigoti</i> Gobert	---; ---; 58, 92, 125, 255, 295 Coastal marshes, July-Aug.; 98. ---; ---; 140, 155	Leclercq	1961
	---; July; 109	Edwards et al.	1939
	---; ---; 45, 98, 119, 301°	Seguy	1926
<i>crassicornis</i> Wahlberg	---; ---; 58	Bouvier	1945
	---; ---; 88	Shannon & Hadjinicolaou	1936
	---; May-July; 98°, 272°	Moucha & Chvala	1956
	---; Aug.; 109	Edwards et al.	1939
	---; ---; 152	Seguy	1926
	---; ---; 272	Anonymous	1946
	---; ---; 331	Cameron	1935
	---; ---; 331	Walton	1924
<i>fraseri</i> Austen	---; May-Oct.; 125	Fairchild	1942
<i>graeca</i> Szilady	---; ---; 125	Shannon & Hadjinicolaou	1936
<i>grande</i> Macquart	---; ---; 125	Shannon & Hadjinicolaou	1936

TABLE I - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>HAEMATOPOTA grandis</i> Macquart	---; Aug.; 109 ---; ---; 301	Seguy Bouvier	1926 1945
<i>hispanica</i> Szilady	---; ---; 34, 58, 109, 119, 140, 155, 255, 278, 295, 333	Leclercq	1961
	---; ---; 88	Moucha & Chvala	1956
<i>italica</i> Meigen	---; very common and bite man viciously; 34° ---; ---; 88	Anonymous Moucha & Chvala	1944 g 1956
	---; common; 92. Coastal marshes; July-Sept.; 98	Edwards et al.	1939
	---; in woods close to tidal waters, Sept.; 98	Yerbury	1913
	---; ---; 109	Seguy	1926
	---; ---; 125	Shannon & Hadjinicolaou	1936
	---; numerous during summer and annoying; 155°	Hargreaves	1923
	---; ---; 295	Arias	1914
	---; June-Aug.; 301°	Bouvier	1945
<i>italica</i> var. <i>argyrophora</i> Kröber	---; ---; 125	Shannon & Hadjinicolaou	1936
<i>italica</i> var. <i>nigricornis</i> Gobert	---; ---; 45. In forest; June-mid-Sept.; 109 ---; ---; 125	Seguy Shannon & Hadjinicolaou	1926 1936
	---; ---; 155, 295, 301	Bouvier	1945
<i>italica</i> <i>variegata</i> Fabricius	---; ---; 34, 58, 125, 155, 255, 333	Moucha	1959
<i>lambi</i> Villeneuve	---; ---; 109, 295	Leclercq	1961
<i>lusitanica</i> Guerin-Meneville	---; ---; 246, 295	Arias	1914
<i>nigricornis</i> Gobert	---; ---; 295	Arias	1914

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>HAEMATOPOTA pandazisi</i> Kröber	---; ---; 125	Shannon & Hadjinicolaou	1936
<i>pluvialis</i> Linnaeus	---; very common and attack man viciously; 34°	Anonymous	1944 g
	---; ---; 58, 125	Shannon & Hadjinicolaou	1936
	---; ---; 88°	Moucha & Chvala	1956
	Muddy pools and dried-up streams; bites man; 98°. ---; June; 119°	Edwards et al.	1939
	---; ---; 98	Yerbury	1913
	---; May-Oct., in forests; 109	Seguy	1926
	---; ---; 109	Noller	1925
	Ponds, reservoirs, swamps, peat bogs, cannibalistic; rural and upland districts, rest on stems and leaves of grass, more active on warm, sunny days, freely attacks and bites man, June-Aug.; 124°	Cameron	1935
	---; ---; 152	Anonymous	1946
	---; numerous during summer and annoying; 155°	Hargreaves	1923
	---; ---; 272	Cameron	1930
	---; ---; 295	Arias	1914
	---; June-Sept., bites man fiercely; 301°	Bouvier	1945
	---; at 1914 m. altitude; 301°	Galli-Valerio	1925
	---; ---; 331	Walton	1924
<i>pseudolusitanica</i> Szilady	---; ---; 246	Szilady	1923
<i>sewelli</i> Austen	---; ---; 125	Shannon & Hadjinicolaou	1936
<i>variegata</i> Linnaeus	---; very common, bite man viciously; 34°	Anonymous	1944 g
	---; Aug.-Sept.; 109	Seguy	1926
	---; ---; 295	Arias	1914
<i>variegata</i> var. <i>nigricornis</i> Gobert	---; ---; 295	Codina	1921
<i>HEPTATOMA pellucens</i> Fabricius	---; ---; 34, 45, 92, 108, 119, 300, 301	Kröber	1922
	---; ---; 88	Anonymous	1944 h

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>HEPTATOMA</i> <i>pellucens</i> Fabricius (cont.)	---; May-Aug., on edge of still waters, ponds, in meadows and damp forests; 109°	Seguy	1926
	---; May, July-Aug.; 109	Surcouf	1924
	Aquatic, near edge of water; Apr.-Aug.; 301°	Bouvier	1945
<i>HETEROCHRYSONS</i> <i>connexus</i> Loew	---; ---; 109, 155, 295	Surcouf	1924
<i>flavipes</i> Meigen	---; ---; 119	Surcouf	1924
<i>italicus</i> Meigen	---; ---; 34, 84, 109, 125, 155, 295	Surcouf	1924
<i>italicus</i> var. <i>nigriventris</i> Loew	---; ---; 125, 155	Surcouf	1924
<i>punctifer</i> Loew	---; ---; 34, 109, 125, 140, 295	Surcouf	1924
<i>HYBOMITRA</i> <i>arpadi</i> (Szilady)	---; ---; 355	Philip	1965
<i>sexfasciata</i> (Hine)	---; ---; 336	Philip	1965
<i>NEMORIUS</i> <i>vitripennis</i> Meigen	---; July; 109	Seguy	1926
	---; ---; 295	Arias	1914
<i>OCHROPS</i> <i>agrestis</i> Wiedemann	---; July; 109	Surcouf	1924
	---; ---; 125	Kröber	1924
	---; ---; 301°	Bouvier	1945
<i>agrestis</i> var. <i>rufipes</i> Szilady	---; ---; 109	Kröber	1925
<i>agricola</i> <i>griseocens</i> Szilady	---; ---; 125	Kröber	1925
<i>wathereus</i> Bigot	---; ---; 301	Bouvier	1940 a

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>OCHROPS</i> <i>fulvus</i> Meigen	---; ---; 34, 45, 92, 98, 108, 109, 119, 125, 136, 140, 155, 228, 295, 300, 301, 333, 341, 355, 356	Kröber	1924
	---; ---; 58	Dryenski	1931
<i>fulvus</i> var. <i>loewianus</i> Villeneuve	---; ---; 109, 119, 140, 295, 356	Kröber	1924
<i>fulvus</i> var. <i>rufipes</i> Meigen	---; ---; 109, 155	Surcouf	1924
<i>latistriatus</i> Brauer	---; ---; 125, 140, 246, 333	Kröber	1924
<i>loevianus</i> Villeneuve	---; ---; 109	Surcouf	1924
<i>nigrifacies</i> Gobert	---; ---; 98, 119, 125	Kröber	1924
	---; July-Aug.; 109	Surcouf	1924
<i>plebejus</i> Fallen	---; ---; 34, 92, 108, 109, 119, 136, 140, 300, 355	Kröber	1924
	---; ---; 301	Bouvier	1940 a
<i>plebejus</i> <i>aethereus</i> Bigot	---; ---; 34, 119	Kröber	1925
<i>plebejus</i> var. <i>calvus</i> Szilady	---; ---; 34, 119, 355	Kröber	1924
<i>rusticus</i> Linnaeus	---; ---; 34, 45, 109, 140, 155, 244, 255, 272	Surcouf	1924
	---; ---; 92, 98, 108, 119, 136, 228, 300, 333, 356	Kröber	1924
	---; ---; 301	Bouvier	1940 a
<i>PANGONIA</i> <i>affinis</i> Loew	---; ---; 125, 295	Kröber	1939
<i>alpinus</i> Drap.	---; ---; 356	Kröber	1925
<i>aperta</i> Loew	---; ---; 246	Kröber	1939

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PANGONIA</i>			
<i>appendiculatus</i> Macquart	---; ---; 295	Kröber	1925
<i>dimidiata</i> Loew	---; ---; 295	Kröber	1939
<i>escalerae</i> Strobl.	---; ---; 295	Kröber	1925
<i>ferruginea</i> Meigen	---; ---; 125, 246, 295	Kröber	1939
<i>flava</i> Meigen	---; ---; 109	Kröber	1925
<i>fulvipes</i> Loew	---; ---; 125	Kröber	1939
<i>fumida</i> Loew	---; ---; 295	Kröber	1925
<i>granatensis</i> Strobl.	---; ---; 295	Kröber	1925
<i>griseipennis</i> Loew	---; ---; 295	Kröber	1925
<i>hannibal</i> Szilady	---; ---; 295	Kröber	1925
<i>haustellata</i> Fabricius	---; ---; 58, 125, 155, 295	Kröber	1939
<i>hermanni</i> Kröber	---; ---; 295	Kröber	1925
<i>hispanica</i> Kröber	---; ---; 295	Kröber	1925
<i>krausei</i> Surcouf	---; ---; 84, 269	Kröber	1925
<i>loewi</i> Kröber	---; ---; 295	Kröber	1925
<i>maculata</i> Fabricius	---; June-July; 109	Surcouf	1924
	---; ---; 295	Arias	1914
<i>marginata</i> Fabricius	---; ---; 125	Waterston	1918
	---; ---; 155, 301	Bouvier	1945
	---; ---; 295	Arias	1914

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PANGONIA</i>			
<i>mauritana</i> Linnaeus	---; ---; 295	Kröber	1939
<i>micans</i> Meigen	---; ---; 109, 119, 125, 295, 333 ---; ---; 301	Kröber Pouvier	1939 1945
<i>obscurata</i> Loew	---; ---; 58, 125, 246, 295	Kröber	1939
<i>pyritosa</i> Loew	---; ---; 58 ---; ---; 125	Shannon & Hadjinicolaou	1936
<i>pyritosa</i> var. <i>decipiens</i> Kröber	---; ---; 125	Kröber	1939
<i>pyritosa</i> var. <i>hirsutipalpis</i> Kröber	---; ---; 58	Kröber	1925
<i>striata</i> Szilady	---; ---; 269	Kröber	1925
<i>variegata</i> Fabricius	---; numerous during summer and annoying; 155° ---; ---; 155, 295	Hargreaves Klöber	1923 1939
<i>variegata</i> var. <i>acutipalpis</i> Kröber	---; ---; 155	Kröber	1925
<i>variegata</i> var. <i>brunneipes</i> Szilady	---; ---; 125, 155	Kröber	1939
<i>PANGONIUS</i>			
<i>haustellatus</i> Fabricius	---; ---; 6, 58, 125, 140, 155, 295, 333 ---; June; 109	Leclercq Seguy	1961 1926
<i>PHYRTA</i>			
<i>lavandoni</i> Kröber	---; ---; 109	Kröber	1939
<i>SILVIUS</i>			
<i>algirus</i> Meigen	---; ---; 58	Kröber	1939
<i>alpinus</i> Drap.	---; ---; 34, 58, 155, 356	Kröber	1939
<i>appendiculatus</i> Macquart	---; ---; 120, 295	Kröber	1922

TABLE I - HORSEFLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SILVIUS</i>			
<i>barbatus</i> Bigot	---; ---; 155	Kröber	1922
<i>cingularis</i> Meigen	---; ---; 295	Kröber	1925
<i>vitali</i> Fabricius	---; ---; 58, 125	Shannon & Hadjinicolaou	1936
<i>vituli</i> Fabricius	---; ---; 34, 109, 119, 155, 255, 295, 333 ---; ---; 58, 140 ---; ---; 88 ---; June-Aug.; 109° ---; ---; 301	Kröber Klöber Anonymous Seguy Bouvier	1922 1939 1944h 1926 1945
<i>SIPALA</i>			
<i>media</i> Kröber	---; ---; 125	Kröber	1928
<i>STRABA</i>			
<i>cordigera</i> Meigen	---; June-Aug.; 45. ---; ---; 109	Seguy	1926
<i>exclusa</i> Pandelle	---; Aug.; 109	Seguy	1926
<i>glaukopis</i> Meigen	---; June-Aug.; 109	Seguy	1926
<i>maculicornis</i> Zetterstedt	---; ---; 45, 84, 109	Seguy	1926
<i>paradoxa</i> Jaennicke	---; ---; 109, 301	Seguy	1926
<i>recta</i> Loew	---; July-Aug.; 109. ---; ---; 295	Seguy	1926
<i>regularis</i> Jaennicke	---; June-July; 109. ---; ---; 125, 155	Seguy	1926
<i>eudetica</i> Zeller	---; June-Aug.; 109. ---; ---; 301 ---; ---; 244	Seguy Riedel	1926 1930
<i>vittata</i> Fabricius	---; July; 109	Seguy	1926
<i>STYPORHAMPHIS</i>			
<i>barbarus</i> Coqueb.	---; ---; 246, 295, 333	Kröber	1939

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SURCOUFIA</i> <i>barbata</i> Bigot	---; ---; 109	Kröber	1939
<i>SZILADYNUS</i> <i>acuminatus</i> Loew	---; ---; 333	Kröber	1939
<i>arpadi</i> Szilady	---; ---; 355	Kröber	1939
<i>aterrimus</i> Meigen	---; ---; 34, 58, 108, 119, 155, 228, 278, 301, 333, 355	Kröber	1939
	---; June-Aug.; 109	Seguy	1926
	---; ---; 244	Riedel	1930
<i>aterrimus</i> var. <i>auripilus</i> Meigen	---; ---; 34, 58, 88, 108, 109, 119, 155, 228, 278, 301, 333, 348, 355	Kröber	1939
	---; July-Aug.; 45. ---; rarely bites man; 109°	Seguy	1926
	---; ---; 244	Riedel	1930
<i>aterrimus</i> var. <i>lugubris</i> Zetterstedt	---; ---; 34, 119, 228, 300, 301, 355	Kröber	1939
	---; ---; 244	Riedel	1930
<i>borealis</i> Loew	---; ---; 34, 88, 98, 108, 119, 125, 300, 355	Kröber	1939
	---; July; 45. ---; ---; 109	Seguy	1926
<i>callunebicola</i> Kröber	---; ---; 119	Kröber	1939
<i>confinis</i> Zetterstedt	---; ---; 108, 300, 355	Kröber	1939
<i>decorus</i> Loew	---; ---; 58, 125	Kröber	1939
<i>distinguendus</i> Verrall	---; May-July; 45. ---; ---; 109	Seguy	1926
	---; ---; 98, 119	Kröber	1939
<i>eupollicatus</i> Pandelle	---; ---; 45. ---; Aug.; 109	Seguy	1926
<i>fulvicornis</i> Meigen	---; June-July; 45. ---; ---; 92. ---, July; 109	Seguy	1926
<i>lapponicus</i> Wahlberg	---; ---; 34, 108, 119, 333, 355	Kröber	1939

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SZILADYNUS</i>			
<i>lapponicus</i>			
var. <i>albomacularius</i> Zetterstedt	---; ---; 355	Kröber	1939
<i>lateralis</i> Meigen	---; ---; 58, 98, 119, 125, 246, 333	Kröber	1939
	---; May-June, in forest; 109	Seguy	1926
<i>longipalpis</i> Kröber	---; ---; 278	Kröber	1939
<i>luridus</i> Fallen	---; ---; 88, 98, 108, 109, 119, 272, 300, 355	Kröber	1939
<i>medius</i> Kröber	---; ---; 125, 140	Kröber	1939
<i>micans</i> Meigen	---; ---; 34, 88, 98, 109, 119, 140, 155, 278, 295, 333, 356	Kröber	1939
	---; May-Aug.; 45	Seguy	1926
	---; ---; 244	Riedel	1930
<i>montanus</i> Meigen	---; ---; 34, 58, 88, 98, 108, 119, 155, 300, 301, 333, 355, 356	Kröber	1939
	---; May-Aug.; 45. ---; ---; 109	Seguy	1926
<i>montanus</i> var. <i>fulvicornis</i> Meigen	---; ---; 58, 88, 98, 119, 152, 155, 272	Kröber	1939
<i>mühlfeldi</i> Brauer	---; ---; 92, 119, 333	Kröber	1939
<i>nigricornis</i> Zetterstedt	---; ---; 34, 88, 140, 300, 301, 355	Kröber	1939
<i>paganus</i> Fabricius	---; June-July; 98	Goffe	1935
<i>rupium</i> Brauer	---; ---; 34	Kröber	1939
	---; June-July; 109	Seguy	1926
<i>solstitialis</i> Schiner	---; ---; 34, 58, 84, 88, 92, 98, 108, 109, 119, 140, 155, 228, 272, 295, 355, 356	Kröber	1939
<i>solstitialis</i> var. <i>clureai</i> Seguy	---; June-Aug.; 255°	Ciurea et al.	1937

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SZILADYNUS</i> <i>taradinus</i> Linnaeus	---, ---; 34, 108, 119, 228, 300, 355	Kröber	1939
<i>tropicus</i> Panzer	---, May-July; 45	Seguy	1926
	---; ---; 58, 98, 108, 109, 119, 228, 295, 300, 301	Kröber	1939
<i>tropicus</i> var. <i>bisignatus</i> Jaennicke	---; ---; 34, 98, 108, 119	Kröber	1939
	---; May-Sept., edge of waters, in woods; 109	Seguy	1926
<i>vittatus</i> Fabricius	---; ---; 295	Kröber	1939
<i>TABANUS</i> <i>acuminatus</i> Loew	---; ---; 333	Kröber	1925
<i>agrestis</i> Wiedemann	---; ---; 109	Kröber	1939
	---; April-Oct.; 125	Fairchild	1942
<i>agricola</i> Wiedemann	---; ---; 58	Kröber	1939
<i>alexandrinus</i> Wiedemann	---; March-April; 125	Fairchild	1942
	---; ---; 155, 295	Kröber	1939
<i>apricus</i> Meigen	---; ---; 34, 56, 109, 119, 125, 140, 155, 333, 348, 356	Kröber	1939
	---; July; 45. ---; Aug., 109	Seguy	1926
	---; ---; 88	Anonymous	1944h
	---; ---; 244, 246, 295	Bouvier	1945
	---; at 1914 m. altitude; 301°	Galli-Valerio	1925
<i>apricus</i> <i>graecus</i> Linnaeus	---; ---; 58	Dryenski	1931
<i>arpadi</i> Szilady	---; ---; 355	Kröber	1925
<i>atavinus</i> Enderlein	---; ---; 333	Kröber	1939
<i>ater</i> Rossi	---; ---; 58, 125, 333	Anonymous	1944c
	---; ---; 109, 155, 246, 295	Austen	1925
	---; numerous during summer and annoying; 155°	Hargreaves	1923

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS</i>			
<i>aterrimus</i>	---; ---; 45	Goetghebuer	1926
Meigen	---; ---; 58	Shannon & Hadjinicolaou	1936
	---; ---; 88	Anonymous	1944h
	---; ---; 228. ---; June-July; 301	Bouvier	1945
	---; ---; 295	Codina	1921
	---; at 1923 m. altitude, June, 301°	Galli-Valerio	1925
<i>aterrimus</i>	---; rare; 45	Goetghebuer	1926
var. <i>auripilus</i>	---; ---; 301°, 356	Bouvier	1945
Meigen			
<i>aterrimus</i>	---; high altitude, 301	Bouvier	1945
var. <i>jacobi</i>			
Bouvier			
<i>aterrimus</i>	---; ---; 109, 119. ---; in high altitude; 301	Bouvier	1945
var. <i>lugubris</i>			
Zetterstedt			
<i>autumnalis</i>	Banks and shallow places of the river; ---, 34.	Edwards	
Linnaeus	---; ---, 84, 87, 125, 300. In moist loam; May-	et al.	1939
	Aug.; 92. Wet muddy margins of ditches, July;		
	98		
	---; sites by day; 34°	Anonymous	1944 g
	---; ---; 38	Leclercq	1961
	---; may bite man; 45	Anonymous	1944 a
	---; ---; 58, 88, 109, 119, 136, 140, 155, 246,	Kröber	1939
	278, 295, 333, 356		
	---; May-Aug.; 109	Surcouf	1924
	---; April-Oct.; 125	Fairchild	1942
	---; common, occasionally attack man; 136°	Anonymous	1944 b
	---; numerous during summer and annoying; 155°	Hargreaves	1923
	---; most numerous in muggy, quiet weather, July; 228°	Anonymous	1944
	---; ---; 300, 341	Kröber	1924
	---; ---; 301	Anonymous	1944 f
<i>autumnalis</i>	---; ---; 38	Leclercq	1961
var. <i>brunneoceras</i>	---; ---; 87, 295	Kröber	1939
Szilady	---; ---; 98, 331	Goffe	1931

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABAHUS</i>			
<i>barbarus</i> Coquebert	---; ---; 246, 295	Leclercq	1961
<i>bifarius</i> Loew	---; ---; 58, 109, 119, 125, 140, 155, 278, 333, 348	Krober	1939
	---; numerous during summer and annoying; 155°	Hargreaves	1923
<i>bisignatus</i> Jaennicke	---; ---; 34, 45, 119, 300. Edge of pools; May-June, in woods; 301	Bouvier	1945
	---; around damp mud, June-July; 98. Shallow pond with layer of leaves carpeting the bottom; ---; 109	Edwards et al.	1939
	In pool; damp places; 109	Surcouf	1924
<i>borealis</i> Meigen	---; ---; 45	Goetghebuer	1926
	---; ---; 88	Anonymous	1944h
	---; ---; 109, 300, 356. ---; rare; 301	Bouvier	1945
<i>bovinus</i> Loew	---; bites by day; 34°	Anonymous	1944g
	---; may bite man; 45	Anonymous	1944a
	---; ---; 45	Goetghebuer	1926
	---; ---; 58, 125	Shannon & Hadjinicolaou	1936
	---; ---; 88	Anonymous	1944h
	---; ---; 92, 108, 109, 119, 155, 333, 341, 356	Krober	1924
	---; June-July; 98	Edwards et al.	1939
	---; in houses, July-Aug.; 109	Van Gaver & Timon-David	1928
	---; ---; 125	Waterton	1918a
	---; common, occasionally attack man; 136°	Anonymous	1944b
	---; ---; 295	Arias	1914
	---; ---; 300	Anonymous	1944e
	Dry areas, gardens, peat; ---; 301	Bouvier	1940a
	Garden soil; forests and prairies, rarely bites man, June-Aug.; 301°	Bouvier	1945
	---; alpine meadows; 301	Galli-Valerio	1927

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS</i> <i>briani</i> Leclercq	---; July; 109. ---; ---; 295, 333	Leclercq	1962
<i>bromius</i> Linnaeus	---; bites by day; 34° ---; ---; 38, 84	Anonymous	1944g
	Heap of chalky soil; ---; 45°. Lake; ---; 92. In turf-clad soil of meadows, grass plots, the green strips around the edges of fields, in fresh molehills in meadows and sands; June-Aug.; 98. In mud beside a small stream, in damp moss on tree stumps; ---; 119°	Edwards et al.	1939
	---; ---; 58, 125	Shannon & Hadjinicolaou	1936
	---; ---; 88	Anonymous	1944 h
	---; ---; 108, 119, 155, 341, 355	Kröber	1924
	---; on plains; 109	Surcouf	1924
	---; Aug.; 109°	Van Gaver & Timor-David	1928
	---; common; 136°	Anonymous	1944 b
	---; numerous during summer and annoying; 155°	Hargreaves	1923
	---; ---; 295	Arias	1914
	---; ---; 300	Anonymous	1944 e
	In soil mixed with turfs and manure in dry ground; ---; 301	Bouvier	1940 a
	---; common, active in warm weather, readily bites man, June-Sept.; 301°	Bouvier	1945
	---; at 1914 m. altitude; 301	Galli-Valerio	1925
<i>bromius</i> var. <i>flavofemoratus</i> Strobl.	---; ---; 38, 84, 269	Leclercq	1961
	---; ---; 109, 295	Surcouf	1924
<i>bromius</i> var. <i>glaucus</i> Meigen	---; ---; 98, 109	Surcouf	1924
	---; ---; 301	Bouvier	1940 a

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS</i>			
<i>bimaculatus</i>	---; ---; 87, 295, 341	Kröber	1924
<i>Szilady</i>	---; May-Aug.; 301	Bouvier	1945
<i>conformis</i>	---; ---; 300	Anonymous	1944 e
<i>Frey</i>			
<i>cordiger</i>	---; ---; 34, 84, 108, 119, 125, 155, 333, 341,	Kröber	1924
<i>Meigen</i>	356		
	---; ---; 38	Leclercq	1961
	---; may bite man; 45	Anonymous	1944 a
	---; ---; 45	Goetghebuer	1926
	---; ---; 58, 125	Shannon & Hadjinicolaou	1936
	Stream; July; 98	Goffe	1935
	Tree stumps; Mar. and June; 109. ---; July-Aug.; 272. ---; abundant in woodland dells; 331°	Edwards et al.	1939
	---; July; 109. ---; ---; 295	Surcouf	1924
	---; numerous during summer and annoying; 155°	Hargreaves	1923
	---; May-Aug.; 301	Bouvier	1945
	---; ---; 331	Goffe	1931
<i>decipiens</i>	---; ---; 125	Kröber	1939
<i>Kröber</i>			
<i>decorus</i>	---; ---; 58, 125	Shannon & Hadjinicolaou	1936
<i>Loew</i>			
<i>denticornis</i>	---; ---; 295	Kröber	1925
<i>Enderlein</i>			
<i>distinguendus</i>	---; ---; 45	Goetghebuer	1926
<i>Verrall</i>	---; ---; 88	Moucha & Chvala	1956
	Forest pools; June, July and Sept.; 98	Edwards et al.	1939
	---; ---; 109, 119. ---; June-July, in mountains; Bouvier 301		1945

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS eggeri</i> Schiner	---; ---; 58, 125	Shannon & Hadjinicolaou	1936
	---; ---; 84, 109, 278, 295, 301	Surcouf	1924
<i>erberi</i> Brauer	---; ---; 34, 125	Kröber	1939
<i>exclusus</i> Pandelle	---; ---; 58, 125	Shannon & Hadjinicolaou	1936
	---; Aug.; 109	Surcouf	1924
	---; ---; 155	Kröber	1939
	---; ---; 356	Kröber	1924
<i>exfollicatus</i> Pandelle	---; ---; 45	Goetghebuer	1926
<i>fulvicornis</i> Meigen	---; ---; 45, 92, 109, 136, 155, 301	Bouvier	1945
<i>fulvus</i> Meigen	---; ---; 34, 45, 92, 108, 119, 136, 140, 228, 295, 300, 301, 355, 356	Kröber	1939
	---; ---; 83	Moucha & Chvala	1956
	Open, heathy woods; June-July; 98. ---; ---; 152, 272	Edwards et al.	1939
	---; July-Aug.; 109	Bouvier	1945
	---; numerous during summer and annoying; 155°	Hargreaves	1923
	---; most numerous in muggy, quiet weather, July; 228°	Anonymous	1944
<i>fulvus</i> var. <i>loewianus</i> Villeneuve	---; ---; 34, 58, 109, 119, 140, 295	Kröber	1939
<i>fulvus</i> var. <i>rufipes</i> Meigen	---; ---; 58, 109, 155	Kröber	1939
<i>gerckeii</i> Brauer	---; ---; 108	Kröber	1925
<i>gigas</i> Herbst	---; ---; 34, 58, 109, 119, 125, 140, 155, 278, 333	Kröber	1939
	---; ---; 45	Goetghebuer	1926

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS</i> <i>gigas</i> Herbst (cont.)	---; ---; 88 ---; ---; 301	Anonymous Bouvier	1944 h 1945
<i>glaukopis</i> Meigen	---; ---; 34, 58, 88, 119, 125, 140, 155, 295, 300, Kröber 333, 348, 356	Kröber	1939
	Dew ponds, moist earth in wooded slopes on hillside; ---; 98	Goffe	1931
	---; Aug.; 98. ---; July-Sept.; 336	Edwards et al.	1939
	---; July-Oct.; 109	Surcouf	1924
	---; Aug.; 109°	Van Glover & Timon-David	1928
	---; rare, July-Aug.; 301	Bouvier	1945
	---; at high altitude; 301°	Galli-Valerio	1925
	---; ---; 341	Kröber	1924
<i>glaukopis</i> var. <i>castellanus</i> Strobl.	---; ---; 295	Kröber	1925
<i>glaukopis</i> var. <i>cognatus</i> Loew	---; ---; 34, 58, 119, 155, 269, 333, 356 ---; ---; 88 ---; ---; 98 ---; Oct.; 109 ---; ---; 341	Kröber Anonymous Goffe Surcouf Kröber	1939 1944 h 1931 1924 1924
<i>graecus</i> Fabricius	---; ---; 34, 58, 109, 125, 140, 155, 295, 333 ---; ---; 88 ---; ---; 255 ---; only in mountains; 301	Kröber Moucha & Chvala Kröber Bouvier	1939 1956 1924 1940
<i>griseus</i> Enderlein	---; ---; 155	Kröber	1939
<i>hadjinicolaoui</i> Kröber	---; ---; 125	Kröber	1939

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS</i>			
<i>haematopotooides</i> Jaennicke	---; ---; 301, 356	Kröber	1924
<i>holtzianus</i> Enderlein	---; ---; 125	Kröber	1939
<i>ignotus</i> Rossi	---; cool, shady places; 155	Guercio	1914
<i>intermedius</i> Egger	---; ---; 58, 84, 155, 278, 295, 301 ---; July-Aug.; 109 ---; ---; 119, 120, 356	Kröber Seguy Kröber	1939 1926 1924
<i>kervillei</i> Surcouf	---; numerous during summer and annoying; 155°	Hargreaves	1923
<i>lasius</i> Surcouf	---; ---; 125, 155	Kröber	1939
<i>lateralis</i> Meigen	---; ---; 58, 125 ---; ---; 88	Shannon & Hadjinicolaou	1936
<i>latistriatus</i> Brauer	---; ---; 98, 125, 140, 246	Kröber	1939
<i>lelelani</i> Austen	---; ---; 58, 125 ---; ---; 87, 155 ---; ---; 333	Shannon & Hadjinicolaou	1936
<i>longipalpis</i> Kröber	---; ---; 278	Kröber	1925
<i>lunatus</i> Fabricius	---; ---; 58, 109, 119, 125, 140, 155, 278, 295, 333 ---; ---; 88	Kröber Anonymous	1939 1944h
<i>lunatus</i> var. <i>farinosus</i> Szilady	---; ---; 108	Kröber	1939
<i>lunatus</i> var. <i>rufus</i> Szilady	---; ---; 125, 155, 333	Kröber	1939

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS luridus</i> Fallen	---; ---; 88 ---; ---; 92. ---; May-July; 98, 272 ---; ---; 300	Anonymous Edwards et al. Anonymous	1944 h 1939 1944 e
<i>maculicornis</i> Zetterstedt	---; ---; 34, 272. In boggy soil; ---; 92. In moss covering the wet low-lying meadows; very common, June-July; 98. In rotting vegetation in river banks; Sept.-Oct.; 119 ---; ---; 45, 58, 108, 136, 155, 228, 300, 333, 348, 355, 356 ---; ---; 88 ---; May, August; 109 ---; May-Aug., on hedges, numerous in mountains; 301 ---; ---; 341	Edwards et al. Kröber Anonymous Surcouf Bouvier Kröber	1939 1944 h 1924 1945 1924 1939
<i>mallorcanus</i> Enderlein	---; ---; 38	Kröber	1939
<i>media</i> Krober	---; ---; 125	Shannon & Hadjinicolaou	1936
<i>micans</i> Meigen	---; ---; 34, 45, 119, 295, 300, 301 ---; ---; 58 ---; ---; 88 Marshes; May-June; 98, 272	Bouvier Shannon & Hadjinicolaou Anonymous Edwards et al.	1945 1936 1944 h 1939
<i>mikii</i> Brauer	---; ---; 34, 58, 88, 119, 300 ---; rare; 92. ---; June-Aug.; 98 ---; ---; 244, 333, 356 ---; ---; 301	Kröber Edwards et al. Klöber Bouvier	1939 1939 1924 1940
<i>mixtus</i> Szilady	---; ---; 58, 87, 333	Kröber	1939

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS</i>	---	Goetghebuer	1926
<i>montanus</i>	---	Shannon & Hadjinicolaou	1936
Meigen	---	Anonymous	1944 h
	---	Anonymous	1944 d
	---	Edwards et al.	1939
	Low-lying sandy heath; June-Aug.; 98, 331	Roman	1937
	---	Bouvier	1945
<i>montanus</i>	---	Anonymous	1944 h
var. <i>fulvicornis</i>	---	Anonymous	1944 h
(Meigen)	---	Kröber	1939
<i>nemoralis</i>	---	Hargreaves	1923
Meigen	---	---	numerous during summer and annoying; 155°
<i>nigricollis</i>	---	Anonymous	1944 h
<i>nigricornis</i>	---	Anonymous	1944 e
Zetterstedt	---	Kröber	1939
<i>nigrifacies</i>	---	Edwards et al.	1939
Gobert	---	Kröber	1939
	Salt marshes, Aug.; 98. Among seaweed on the seashore; ---; 109	Kröber	1939
<i>nigritus</i>	---	Kröber	1939
Fabricius	---	Kröber	1939
<i>obsolescens</i>	---	Kröber	1939
Pandelle	---	Van Gaver & Timon-David	1928
<i>paradoxus</i>	---	Kröber	1924
Jaennicke	---	Bouvier	1945
	---	Kröber	1939
<i>paradoxus</i>	---	Kröber	1939
var. <i>macedonicus</i>	---	Kröber	1939
Kröber	---		

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS</i> <i>peculiaris</i> Szilady	---; ---; 125	Kröber	1939
<i>perplexus</i> Verrall	---; ---; 98	Goffe	1935
<i>plebejus</i> Fallen	---; ---; 34, 108, 119, 136, 140, 300, 355 ---; ---; 45	Kröber	1939
	---; ---; 92, 109. ---; July; 98	Goetghebuer	1926
		Edwards et al.	1939
<i>plebejus</i> var. <i>aethereus</i> Bigot	---; ---; 34, 119, 355	Kröber	1939
<i>pulchellus</i> Loew	---; ---; 87	Kröber	1939
<i>quatuornotatus</i> Meigen	---; ---; 34, 45, 58, 88, 109, 119, 140, 155, 278, 295, 301, 333 ---; rare; 45	Kröber	1939
	---; April-June; 125	Goetghebuer	1926
	---; ---; 356	Fairchild	1942
		Bouvier	1945
<i>rectus</i> Loew	---; ---; 58, 155, 295 ---; July-Aug.; 109	Kröber	1939
		Van Gaver & Timon-David	1928
	---; ---; 301	Bouvier	1945
	---; ---; 333, 341	Kröber	1924
<i>regularis</i> Jaennicke	---; ---; 12, 34, 109, 125, 155, 348 ---; ---; 341	Kröber	1939
		Kröber	1924
<i>regularis</i> <i>rufus</i> Szilady	---; ---; 84 ---; ---; 87	Leclercq	1961
<i>rousselii</i> Macquart	---; ---; 125, 155	Kröber	1925
<i>rupium</i> Brauer	---; ---; 301	Austen	1925
		Bouvier	1945

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS</i> <i>rusticus</i> Linnaeus	---; bites by day; 34°	Anonymous	1944g
	---; ---; 34, 45, 58, 92, 108, 109, 119, 136, 140, 155, 228, 300, 335, 356	Kröber	1939
	---; July, Sept.; 98. ---; rare; 272. ---; ---; 343	Edwards et al.	1939
	---; July; 228°	Anonymous	1944
	---; frequently bite legs, June-July; 301°	Bouvier	1945
<i>rusticus</i> var. <i>nigra</i> Enderlein	---; ---; 125	Shannon & Hadjinicolaou	1936
<i>shannonella</i> Kröber	---; ---; 125	Kröber	1939
<i>solstitialis</i> Schiner	---; bites by day, especially on hot sultry day; 34°	Anonymous	1944g
	---; ---; 34, 45, 98, 109, 119, 140, 301°	Bouvier	1945
	---; ---; 58	Shannon & Hadjinicolaou	1936
	---; ---; 88	Anonymous	1944h
	---; ---; 92, 124	Edwards et al.	1939
	---; numerous during summer and annoying; 155°	Hargreaves	1923
<i>spectabilis</i> Loew	---; ---; 58, 125, 295	Kröber	1939
	---; ---; 109, 155	Surcouf	1924
	---; ---; 333, 341	Kröber	1924
<i>spodopterus</i> Meigen	---; ---; 34, 109, 295. ---; mountain species; 301	Bouvier	1945
	---; ---; 34, 58, 88, 119, 140, 155, 341, 356	Kröber	1939
	---; ---; 125	Shannon & Hadjinicolaou	1936
	---; numerous during summer and annoying; 155°	Hargreaves	1923
	---; alpine meadows; 301	Galli-Valerio	1927
	---; ---; 333	Kröber	1924

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS</i> <i>sudeticus</i> Zeller	---; ---; 45	Anonymous	1944a
	---; ---; 58	Dryenski	1931
	---; ---; 88, 92, 109, 119, 341, 356	Kröber	1924
	---; July-Aug.; 98, 331	Edwards et al.	1939
	---; ---; 124	Cameron	1935
	---; ---; 125	Shannon & Hadjinicolaou	1936
	---; ---; 152	Anonymous	1946
	Open bogs; July-Aug.; 272	Goffe	1931
	---; ---; 295	Arias	1914
	---; very rare, June; 301°	Bouvier	1945
	---; at 1914 m. altitude; 301	Galli-Valerio	1925
<i>sudeticus</i> var. <i>confusus</i> Goffe	---; ---; 98, 152	Goffe	1931
<i>sudeticus</i> var. <i>distinctus</i> Goffe	---; ---; 98	Goffe	1931
<i>sudeticus</i> var. <i>meridionalis</i> Goffe	---; ---; 98, 272	Goffe	1931
<i>sudeticus</i> var. <i>perplexus</i> Verrall	---; ---; 34, 88, 109, 119, 301	Kröber	1939
	---; ---; 98, 152, 331	Goffe	1931
	---; ---; 356	Kröber	1924
<i>sudeticus</i> var. <i>sudeticus</i> Zeller	---; ---; 98. ---; July-Aug.; 272	Goffe	1931
<i>taeniola</i> de Beauvois	---; April-Oct.; 125	Fairchild	1942
<i>tarandinus</i> Linnaeus	---; ---; 300	Anonymous	1944e

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS tenuicornis</i> Enderlein	---; ---; 88 ---; ---; 125, 140	Anonymous Kröber	1944 h 1939
<i>tenuistria</i> Kröber	---; ---; 125	Shannon & Hadjinicolaou	1936
<i>tergestinus</i> Egger	---; ---; 34, 58, 119, 125, 155, 295, 333, 356 ---; ---; 45, 109, 301 ---; numerous during summer and annoying; 155° ---; ---; 341	Kröber Bouvier Hargreaves Kröber	1939 1945 1923 1924
<i>tinctus</i> Walker	---; ---; 84, 269, 278	Leclercq	1961
<i>tricolor</i> Zeller	---; ---; 58, 278	Kröber	1939
<i>tropicus</i> Linnaeus	---; ---; 34, 45, 98, 109, 119, 228, 255. Wet moss; ---; 301 ---; ---; 58 ---; ---; 88 ---; May-Aug.; 98. In damp moss of marshy meadows, Edwards forest pools or rice fields, in mud with leaves of et al. nearly dried-up pools; ---; 119. ---; ---; 152, 331 ---; common; 136° ---; ---; 295	Bouvier Shannon & Hadjinicolaou Anonymous Anonymous	1945 1936 1944 h 1939 1944 b 1921
<i>tropicus</i> var. <i>bisignatus</i> Jaennicke	---; ---; 45	Goetghebuer	1926
<i>tricolor</i> var. <i>ruficaudus</i> Enderlein	---; ---; 341	Kröber	1939
<i>tunicatus</i> Szilady	---; ---; 125, 140, 278, 333	Kröber	1939
<i>tunicatus</i> var. <i>rufescens</i> Szilady	---; ---; 125	Kröber	1939

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TABANUS</i>			
<i>umbrinus</i> Meigen	---; ---; 34, 58, 125, 155, 333	Kröber	1939
<i>unifasciatus</i> Loew	---; ---; 34, 58, 119, 125, 140 ---; June; 109 ---; ---; 246, 295 ---; ---; 333, 341, 356	Kröber Surcouf Arias Kröber	1939 1924 1914 1924
<i>velutinus</i> Kröber	---; ---; 125	Kröber	1939
<i>verralli</i> Oldroyd	Open bogs and boggy heaths; ---; 98, 152, 331. ---; June-Aug.; 124	Edwards et al.	1939
<i>vittatus</i> Fabricius	---; ---; 295	Kröber	1925
<i>zimini</i> Ols.	---; ---; 295	Kröber	1939
<i>THERIOPLECTES</i>			
<i>acuminatus</i> Loew	---; ---; 333	Kröber	1923
<i>albipes</i> Fabricius	---; ---; 45, 357. ---; in dunes; 109. ---; numerous on clover, in rice fields; 155	Seguy	1926
<i>atavina</i> Enderlein	---; ---; 333	Kröber	1925
<i>aterrimus</i> Meigen	---; high mountains; 34 ---; ---; 58 ---; ---; 109, 119, 125, 155, 228, 278, 301, 341, 355	Surcouf Dryenski Klöber	1924 1931 1923
<i>aterrimus</i> var. <i>auripilus</i> Meigen	---; ---; 34, 88, 108, 109, 119, 155, 228, 278, 301, 333, 348, 355	Klöber	1923
<i>aterrimus</i> var. <i>lugubris</i> Zetterstedt	---; ---; 34, 109, 119, 155, 228, 295, 300, 301, 355 ---; ---; 58	Klöber Dryenski	1923 1931
<i>auripilus</i> Meigen	---; ---; 301	Bouvier	1940
<i>bisignatus</i> Jaennicke	Wet mud on edge of marsh; ---; 301	Bouvier	1940

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>THEKIOPLECTES borealis</i> Meigen	---; ---; 34, 88, 92, 98, 108, 119, 125, 300, 355 ---; ---; 98. ---; highlands; 272 ---; June; 109, 244 Wet mud on edge of marsh; ---; 301	Kröber Goffe Surcouf Bouvier	1923 1931 1924 1940
<i>confinis</i> Zetterstedt	---; ---; 300, 301, 355	Kröber	1923
<i>denticornis</i> Enderlein	---; ---; 295	Kröber	1925
<i>distinguendus</i> Verrall	---; ---; 45, 109 ---; mid June-Sept., coast; 98, 272 ---; ---; 119, 155 ---; mountain; 301	Surcouf Goffe Kröber Bouvier	1924 1931 1923 1940
<i>distinguendus</i> var. <i>parvus</i> Goffe	---; ---; 152	Goffe	1931
<i>distinguendus</i> var. <i>rufifrons</i> Goffe	---; ---; 272	Goffe	1931
<i>fulvicornis</i> Meigen	---; ---; 109, 136, 155 ---; rare; 301	Surcouf Bouvier	1924 1940
<i>lapponicus</i> Zetterstedt	---; ---; 34, 108, 119, 333, 355	Kröber	1923
<i>lapponicus</i> var. <i>albonotatus</i> Zetterstedt	---; ---; 355	Kröber	1923
<i>lateralis</i> Muhlfeld	---; ---; 34, 155. ---; July; 109 ---; ---; 98, 109, 119, 125, 333	Surcouf Klöber	1924 1923
<i>longipalpis</i> Kröber	---; ---; 278	Klöber	1923
<i>lugubris</i> Zetterstedt	---; altitude higher than 1,000 meters; 301	Bouvier	1940
<i>luridus</i> Fallen	---; ---; 88, 92, 109, 119, 244, 300, 355 ---; ---; 98, 272	Klöber Goffe	1923 1931

TABLE 1 - HORSEFLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>THERIOPLECTES</i> <i>micans</i> Meigen	---; ---; 34, 88, 109, 119, 140, 155, 278, 295, 333	Kröber	1923
	---; ---; 45	Surcouf	1924
	---; ---; 98, 272, 331	Goffe	1931
	---; mountains; 301	Bouvier	1940
<i>montanus</i> Meigen	---; ---; 34, 88, 92, 98, 109, 119, 155, 244, 300, 301, 356	Kröber	1923
	---; ---; 45, 355	Surcouf	1924
	---; ---; 58	Dryenski	1931
	---; ---; 124. ---; June-July; 272	Goffe	1931
	---; ---; 152	Anonymous	1946
<i>montanus</i> var. <i>fulvicornis</i> Meigen	---; ---; 88, 109, 119, 155, 301	Kröber	1923
	---; ---; 98, 272, 331	Goffe	1931
<i>mühlfeldi</i> Brauer	---; ---; 84, 92, 119, 140, 333	Kröber	1923
<i>nigricornis</i> Zetterstedt	---; ---; 34, 88, 109, 140, 155, 300, 301, 355	Kröber	1923
<i>rupium</i> Brauer	---; ---; 34, 155, 301	Kröber	1923
<i>solstitialis</i> Schiner	---; ---; 34, 84, 88, 92, 98, 109, 119, 140, 155, 272, 278, 295, 333, 355, 356	Kröber	1923
	---; ---; 45	Surcouf	1924
	---; ---; 301°	Galli-Valerio	1922
<i>tarandinus</i> Linnaeus	---; ---; 34, 108, 119, 228, 244, 300, 355, 358	Kröber	1923
<i>tergestinus</i> Egger	---; in forest, June-Aug.; 109	Seguy	1926
<i>tricolor</i> <i>ruficauda</i> Enderlein	---; ---; 341	Kröber	1925

TABLE 1 - HORSEFLIES (conclusion)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>THERIOPLECTES</i> <i>tropicus</i> Panzer	---; ---; 34, 45, 255	Surcouf	1924
	---; ---; 92, 98, 109, 119, 228, 295, 300, 301	Kröber	1923
	---; ---; 124	Goffe	1931
<i>tropicus</i> var. <i>bisignatus</i> Jaennicke	---; ---; 34, 98, 119	Kröber	1923
	---; ---; 45, 301. ---; on edge of water bodies and in woods; 109	Surcouf	1924
<i>tropicus</i> var. <i>tropicus</i> Linnaeus	---; commonly in most low-lying woods and forests; Goffe	Goffe	1931
<i>unifasciatus</i> Loew	---; ---; 109	Seguy	1926
<i>vittatus</i> Loew	---; ---; 295	Kröber	1923

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F. BITING FLIES

Biting flies belong to several families. The table includes only 5 species.

TABLE 1 - BITING FLIES

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>GRATAERHINA pallida</i> Latreille	---; in houses; 45° ---; in houses, bite very painful; 119°	Leclercq Steiniger	1962 1958
<i>HAEMATOBIA stimulans</i> Meigen	---; enter houses, rare; 34° ---; May-Sept.; 124°	Anonymous Edwards et al.	1944b 1939
<i>HIPPOBOSCA equina</i> Linnaeus	---; ---; 119° ---; ---; 155° ---; ---; 295°	Hesse Leclercq Hase	1931 1962 1927
<i>LIPOPTENA cervi</i> Linnaeus	---; near ponds, dams, bites cause skin irritations, Nov. and Dec.; 119°	Hase	1939
<i>STOMOXYS calcitrans</i> (Linnaeus)	---; enter houses, extremely annoying; 34° ---; vigorous biter, suspected of transmitting leishmaniasis; 84° ---; common; 92° ---; enters houses or.-Nov.; 98° Decaying vegetable matter; Aug.-Sept.; 98° ---; in houses; 109. ---; in houses, all year; 119 ---; experimental transmission of <i>Paratyphus breslau</i> ; 119° ---; bites cause swelling of tissues followed by severe inflammation, May-Oct.; 124° ---; bites man fiercely; 125° ---; common; 136° Decaying vegetable material of all sorts; bite is painful; 155° ---; in houses, bites man indoors and out, June-Nov.; 272°	Anonymous Anonymous Anonymous Graham-Smith Roth Kuhn Birk Edwards et al. Anonymous Anonymous Anonymous Thomson	1944b 1944d 1944a 1916 1913 1922 1932 1939 1944c 1944 1945 1937

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G. NON-BITING FLIES

The entries for non-biting flies include representatives of several groups. Of course, the most important species in this category are those that feed as larvae on the tissue of living animals.

The tables include 38 species or subspecies.

TABLE 1 - NON-BITING FLIES

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ANISOPHUS fenestralis</i> (Scopoli)	Tr. holes, cow dung, decaying roots, fermenting organic matter; ---; 98*	Shrewsbury	1930
<i>ANTHOMYIA pluvialis</i> (Linnaeus)	---; ---; 98*	Keilin	1924
<i>radicum</i> (Linnaeus)	---; ---; 278*	De Stefani	1915
<i>CALLIPHORA erythrocephala</i> Meigen	---; ---; 98*	Graham-Smith	1914
	---; carrier of infections from human excrement to man, in houses, June-Oct.; 119	Teschner	1958
	---; ---; 119*	Eidmann	1936
<i>vomitoria</i> (Linnaeus)	---; ---; 98*	Harvey	1934
<i>CHLOROPS hypostigma</i> Meigen	---; walls, ceilings, floors, houses covered with vines; 358°	Fritsch	1933
<i>ERISTALIS arbustorum</i> Linnaeus	---; ---; 278*	De Stefani	1915
<i>cenax</i> (Linnaeus)	---; ---; 98*	Graham-Smith	1914
<i>FAUNIA canicularis</i> (Linnaeus)	---; ---; 45*	Elewaut-Rijsselaera & Leclercq	1963
	---; common in houses from May-July; 98*	Graham-Smith	1914
	---; ---; 98*	Mumford	1926
	---; ---; 109*	Ouzilleau	1928
	Egg deposited on clean food, in open areas, moldy plants, barn dirt; in toilets, houses; 119	Wilhelmi	1919
	---; carrier of infections from human excrement to man, in houses, May-Sept.; 119	Teschner	1958
	---; in houses; 269	Logan et al.	1953

TABLE 1 - NON-BITING FLIES (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>FANNIA manicata</i> (Meigen)	---; carrier of infections from human excrement to man, June-Oct.; 119	Teschner	1958
<i>scalaris</i> (Fabricius)	---; April-Oct.; 45*	Goeighebuer	1929
	---; ---; 98*	Graham-Smith	1914
	---; ---; 108*	Forsius	1925
	---; carrier of infections from human excrement to man, in houses, July-Sept.; 119	Teschner	1958
	---; ---; 228*	Natvig	1938
<i>GASTEROPHILUS flavipes</i> Olivier	---; ---; 333*	Anonymous	1944 d
<i>haemorrhoidalis</i> (Linnaeus)	---; ---; 109*	Seguy	1928
<i>HYDROTAEA dentipes</i> Fabricius	---; carrier of infections from human excrement to man; 119	Teschner	1958
<i>irritans</i> (Fallen)	---; carrier of infections from human excrement to man, in houses, June-Oct.; 119	Teschner	1958
<i>HYPODERMA bovis</i> (Linnaeus)	---; ---; 98*	Turner	1945
	---; ---; 98*	Smart	1939
	---; occasionally parasitizes man; 108°	Anonymous	1944 c
	---; May-Sept.; 109*	Lapierre	1958
	---; ---; 109*	Andre	1925
	---; occasionally parasitizes man; 119°	Anonymous	1944
<i>lineatum</i> (Villers)	---; ---; 98*, 119*	Fernandez	1946
	---; ---; 109*	Lapierre	1958
	---; ---; 228*	Natvig	1938
<i>LUCILIA caesar</i> (Linnaeus)	---; carrier of infections from human excrement to man, in houses, July-Sept.; 119	Teschner	1958
<i>sericata</i> Meigen	---; ---; 333*	Baranoff & Jezic	1928

TABLE 1 - NON-BITING FLIES (continued)

SPECIES	BREEDING HABITS: ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>MUSCA</i> <i>autumnalis</i> De Geer	---; enter houses and become annoying, common in late summer and early fall; 34*	Anonymous	1944b
<i>corvina</i> Fabricius	---; ---; 98*	Graham-Smith	1914
<i>domestica</i> Linnaeus	---; ---; 98*	Mumford	1926
	---; ---; 98*	Graham-Smith	1914
	---; transmit enteric infections in the slums especially during summer; 152*	Anonymous	1946
	---; ---; 228*	Natvig	1932
	---; ---; 255*	Leon	1921
<i>MUSCINA</i> <i>stabulans</i> (Fallen)	---; carrier of infections from human excrement to man, in houses; 119	Teschner	1958
	---; ---; 155*	Franchini	1927
	---; ---; 336*	Graham-Smith	1914
<i>MYIOSPILA</i> <i>meditabunda</i> (Fabricius)	---; carrier of infections from human excrement to man; 119	Teschner	1958
<i>OESTRUS</i> <i>intestinalis</i> De Geer	---; ---; 98*	Galli-Valerio	1929
<i>ovis</i> Linnaeus	---; ---; 84*	Coulon & Dinulescu	1931
	---; ---; 109*	Galliard	1934
	---; ---; 119*	Scherf	1960
	---; ---; 155*	Patton	1921
	---; ---; 278*	De Stefani	1915
	---; ---; 295*	Gomez	1946
	---; ---; 301*	Keiser	1948
<i>PHAENICIA</i> <i>sericata</i> (Meigen)	---; carrier of infections from human excrement to man, in houses, June-Sept.; 119	Teschner	1958

TABLE 1 - NON-BITING FLIES (conclusion)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PIOPHILA casei</i> (Linnaeus)	---; ---; 98* ---; in houses; 269	Graham-Smith Logan et al.	1914 1953
<i>POLLENIA rufa</i> (Fabricius)	---; ---; 278*	De Stefani	1915
<i>RHINOESTRUS purpureus</i> (Brauer)	---; ---; 109* ---; ocular myiasis; 155*	Galliard Anonymous	1934 1945
<i>SARCOPHAGA albiceps</i> Meigen	---; carrier of infections from human excrement to man; 119	Teschner	1958
<i>carvaria</i> (Linnaeus)	---; ---; 278*	De Stefani	1915
<i>haematodes</i> Meigen	---; carrier of infections from human excrement to man; 119	Teschner	1958
<i>haemorrhoidalis</i> (Fallén)	---; carrier of infections from human excrement to man, June-Sept.; 119 ---; ---; 333* Decaying matter near houses; May-Oct.; 336*	Teschner Anonymous Séguy	1958 1944 d 1928
<i>latifrons</i> Fallen	---; causes body cavity myiasis; 88*, 255*, 336*	Séguy	1928
<i>WOHLFAHRTIA magnifica</i> (Schiner)	---; ---; 58* ---; ---; 295* ---; ---; 295*. ---; ---; 333 (Traumatic dermal myiasis) ---; ---; 333*	Anonymous Najera Angulo James Baranoff & Jezic	1944 a 1935 1947 1928
<i>meigeni</i> (Schiner)	---; causes cutaneous myiasis; 34*, 109*, 119*	Séguy	1928

TABLE 2 - SUMMARY OF DISEASES OR DISEASE ORGANISMS TRANSMITTED BY
NON-BITING FLIES

SPECIES	DISEASE ORGANISM				DISTRIBUTION	
	VIRUS &	RICKETTSIA	PROTOZOA	HELMINTHS	OTHER	
	:	:	:	:	:	:
<i>ANISOPHUS tenestralis</i> Scopoli				Enteritis	98	
<i>ANTHOMYIA pluvialis</i> (Linnaeus)				Ear myiasis	98	
<i>radicum</i> (Linnaeus)				Ear myiasis	278	
<i>CALLIPHORA erythrocephala</i> Meigen				Intestinal myiasis	98	
<i>vomitoria</i> Linnaeus				Myiasis	98	
<i>ERISTALIS arbustorum</i> Linnaeus				Intestinal myiasis	278	
<i>tenax</i> (Linnaeus)				Intestinal myiasis	98	
<i>FANNIA canicularis</i> (Linnaeus)				Urinary myiasis	45	
<i>scalaris</i> (Fabricius)				Intestinal myiasis	98	
				Urethal myiasis	98 (Mumford 1926)	
				Urethal myiasis	109	
				Intestinal myiasis	45	
				Intestinal myiasis	98	
				<i>Fanniasis intestinalis</i>	108	
				<i>Myiasis interma</i>	228	

TABLE 2 - NON-BITING FLIES (continued)

SPECIES	DISEASE ORGANISM				DISTRIBUTION
	VIRUS &	:	HELMINTHS	OTHER	
	RICKETTSIA	PROTOZOA	:	:	
		:	:	:	
<i>GASTEROPHILUS</i> <i>flavipes</i> Olivier			Cutaneous myiasis		333
<i>haemorrhoidalis</i> (Linnaeus)			Myiasis		109
<i>HYPODERMA</i> <i>bovis</i> (Linnaeus)			Creeping myiasis		98
			Myiasis		98 (Smart 1939)
			Myiasis		109
			Ear myiasis		109 (Andre 1925)
<i>lineatum</i> (Villers)			Myiasis		98, 119
			Subcutaneous myiasis		109
			Subcutaneous myiasis		228
<i>LUCILIA</i> <i>sericata</i> Meigen			Myiasis		333
<i>MUSCA</i> <i>domestica</i> Linnaeus			Intestinal myiasis		98
			Urethral myiasis		98 (Mumford 1926)
			Enteric infections		152
			Intestinal myiasis		228
<i>MUSCINA</i> <i>stabulans</i> (Fallen)			Intestinal myiasis		155
			Intestinal myiasis		336

TABLE 2 - NON-BITING FLIES (continued)

SPECIES	DISEASE ORGANISM				DISTRIBUTION
	VIRUS &	:	PROTOZOA	HELMINTHS	
	RICKETTSIA	:	:	OTHER	
<i>OESTRUS</i>					
<i>intestinalis</i>					
De Geer				Creeping myiasis	98
<i>ovis</i>				Ocular myiasis	84
Linnaeus				Ocular myiasis	109
				Ophthalmomyiasis	119
				Myiasis	155
				Nasal myiasis	278
				Ocular myiasis	295
				Ocular myiasis	301
<i>PIOPHILA</i>					
<i>casei</i>				Nasal myiasis	98
(Linnaeus)					
<i>POLLENIA</i>					
<i>rudis</i>				Intestinal myiasis	278
(Fabricius)					
<i>RHINOESTRUS</i>					
<i>purpureus</i>				Ocular myiasis	109
(Brauer)				Ocular myiasis	155
<i>SARCOPHAGA</i>					
<i>carnaria</i>				Myiasis	278
(Linnaeus)					
<i>haemorrhoidalis</i>				Intestinal myiasis	333
(Fallen)				Body cavity myiasis	336
<i>latifrons</i>				Body cavity myiasis	88, 255, 336
Fallen					

TABLE 2 - NON-BITING FLIES (continued)

SPECIES	DISEASE ORGANISM				DISTRIBUTION	
	: VIRUS &	:	: PROTOZOA :	HELMINTHS	OTHER :	
<i>OESTRUS</i>						
<i>intestinalis</i>						
De Geer					Creeping myiasis	98
<i>ovis</i>					Ocular myiasis	84
Linnaeus					Ocular myiasis	109
					Ophthalmomo- myiasis	119
					Myiasis	155
					Nasal myiasis	278
					Ocular myiasis	295
					Ocular myiasis	301
<i>PIOPHILA</i>						
<i>casei</i>						
(Linnaeus)					Nasal myiasis	98
<i>POLLENIA</i>						
<i>rufa</i>						
(Fabricius)					Intestinal myiasis	278
<i>RHINOESTRUS</i>						
<i>purpureus</i>						
(Brauer)					Ocular myiasis	109
					Ocular myiasis	155
<i>SARCOPHAGA</i>						
<i>carraria</i>						
(Linnaeus)					Myiasis	278
<i>haemorrhoidalis</i>						
(Fallen)					Intestinal myiasis	333
					Body cavity myiasis	336
<i>latifrons</i>						
Fallen					Body cavity myiasis	88, 255, 336

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H. FLEAS

The entries for fleas include almost no biology. Very few authors deal with flea biology. A few authors comment on fleas as vectors, but most of the literature deals with taxonomy and host.

The tables include 330 species or subspecies.

TABLE I - FLEAS

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>AMPHIPSYLLA</i>	---	Ioff	1928 +
<i>rossica</i>	---; ---; 88°	Rosicky	1944
Wagner	---; ---; 88	da Costa	
<i>rossica</i>	---; ---; 34, 333	Lima & Hathaway	
<i>rossica</i>		Hathaway	1946
Wagner		Rosicky	1944
<i>sepifera</i>	---; ---; 34, 301	Rosicky	1944
Jordan & Rothschild		Seguy	1944
<i>sibirica</i> (Wagner)	---; ---; 88	Rosicky	1944
	---; ---; 104, 228	Seguy	1944
<i>sibirica</i>	---; Nov.-Dec.; 88	Rosicky	1957
<i>hetera</i>			
Jordan			
<i>sibirica</i>	---; Nov. and Dec.; 88	Rosicky	1957
<i>intermedia</i>			
Rosicky			
<i>sibirica</i>	---; ---; 34, 301	da Costa	
<i>sepifera</i>		Lima &	
Jordan & Rothschild		Hathaway	1946
	---; ---; 356	Rosicky	1957
<i>sibirica</i>	---; ---; 108, 355	Rosicky	1957
<i>sibirica</i>	---; ---; 108, 109, 355	da Costa	
<i>thoracica</i>		Lima &	
(Rothschild)		Hathaway	1946
<i>sibirica</i>	---; ---; 355	Wagner	1933 a
<i>thoraciculus</i>			
(Rothschild)			
<i>thoracicus</i>	---; ---; 88	Jordan	1932
<i>hetera</i>			
Jordan			
<i>thoraciculus</i>	---; ---; 108, 228	Jordan	1932 b
<i>thoraciculus</i>			
Rothschild			
<i>ARAEOPSYLLA</i>	---; ---; 155	da Costa	
<i>geotroi</i>		Lima &	
(Rothschild)		Hathaway	1946

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ARAEOPSYLLA hispanica</i> Collado	---; ---; 255	da Costa Lima & Hathaway	1946
	---; ---; 295	Wagner	1938
<i>ARCHAEOPSYLLA erinacei</i> (Bouché)	---; ---; 88	Rosicky	1944
	---; ---; 98, 152, 331	Thompson	1935
	---; ---; 109, 119, 136, 140, 155, 244, 301, 343, 358	Dampf	1926
<i>erinacei</i> <i>erinacei</i> (Bouché)	---; ---; 34, 45, 58, 88, 98, 109, 119, 125, 136, 140, 152, 155, 255, 269, 272, 301, 331, 333	Hopkins & Rothschild	1953
	---; ---; 124	Freeman	1950
	---; ---; 246	Rothschild	1915
	---, ---; 300	da Costa Lima & Hathaway	1946
<i>erinacei</i> <i>maura</i> Jordan & Rothschild	---; ---; 38, 246, 295	Hopkins & Rothschild	1953
<i>ARCTOPSYLLA tuberculaticeps</i> (Bezzi)	---; ---; 155, 336	Rosicky	1944
<i>ATYPHLOCERAS nuperus</i> <i>nuperus</i> (Jordan)	---; ---; 109	Hopkins & Rothschild	1962
<i>nuperus</i> <i>palinus</i> (Jordan)	---; ---; 34, 88, 119, 155, 244, 333	Smit	1956
<i>CERATOPHYLLUS affinis</i> Nordberg	---; ---; 108	Wagner	1938
<i>angulatus</i> Wahlgren	---; ---; 228	da Costa Lima & Hathaway	1946
<i>arvensis</i> (Dalle)	---; ---; 98	da Costa Lima & Hathaway	1946

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CERATOPHYLLUS auritus</i> (Fabricius)	---; ---; 300	da Costa Lima & Hathaway	1946
<i>borealis</i> Rothschild	---; ---; 34, 109, 141, 155, 271, 272, 301 ---; ---; 98, 108, 136	Jordan	1932
	---; ---; 119	da Costa Lima & Hathaway	1946
	---; ---; 124	Eichler	1938
	---; ---; 356	Freeman	1950
	---; ---; 88	Seguy	1944
<i>columbae</i> (Walckenaer & Gervais)	---; ---; 98, 272	Rosicky	1944
	---; ---; 98, 119, 136 (In houses, bites man)	Rothschild	1915
	---; ---; 108, 119, 136, 301	Peus	1938
	---; ---; 124	da Costa Lima & Hathaway	1946
	---; ---; 295	Freeman	1950
	---; ---; 300, 358	Gil Collado	1948 +
<i>delichoni</i> Nordberg	---; ---; 108	Dampf	1926
<i>farreni</i> Rothschild	---; ---; 98, 358	Wagner	1938
	---; ---; 119	Dampf	1926
<i>farreni</i> <i>farreni</i> Rothschild	---; ---; 108, 119, 152, 272 ---; ---; 124	Peus	1938
	---; ---; 124	da Costa Lima & Hathaway	1946
<i>fasciatus</i> (Bosc d'Antic)	---; ---; 34, 87, 88, 98, 109, 125, 140, 155, 272, 278, 301	Rothschild	1915
	---; common; 92°	Jordan & Rothschild	1921 c
	---; attacks man readily under experimental conditions; 98°	Anonymous	1944e
	---; enters houses; 109°	Strickland & Merriman	1913
		Roubaud	1931

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CERATOPHYLLUS fasciatus</i> (Bosc d'Antic) (cont.)	---; ---; 119, 358 ---; carrier of plague; 124° ---; ---; 124 ---; ---; 141 ---; ---; 193 ---; common; 228	Dampf Bacot Rothschild Jordan Zammit Anonymous	1926 1919 1915 1932 1918 1944 a
<i>flaveolus</i> Rothschild	---; ---; 34	da Costa Lima & Hathaway	1946
<i>freyi</i> Nordberg	---; ---; 108	Wagner	1938
<i>fringillae</i> (Walker)	---; ---; 88 ---; ---; 98, 108, 136 ---; ---; 119 ---; ---; 124 ---; ---; 301, 358	Rosicky da Costa Lima & Hathaway Peus Freeman Dampf	1944 1946 1938 1950 1926
<i>gallinae</i> (Schrank)	---; ---; 88 ---; ---; 92°, 300° ---; ---; 98, 272 ---; ---; 98, 119, 136, 140, 301 (In houses, bites man) ---; ---; 119, 136, 140, 300, 301, 358 ---; ---; 124° ---; ---; 336°	Rosicky Lundblad Rothschild Peus Dampf Bacot Smart	1944 1930 1915 1938 1926 1919 1943
<i>gallinae gallinae</i> (Schrank)	---; ---; 98, 108, 136, 140, 300, 301	da Costa Lima & Hathaway	1946
<i>gallinulae</i> (Dale)	---; ---; 124 ---; ---; 98, 136, 246, 301 ---; ---; 124	Freeman Dampf Rothschild	1950 1926 1915

TABLE 1 - FLLAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CERATOPHYLLUS</i> <i>garei</i> Rothschild	---; ---; 88 ---; ---; 98, 152, 272 ---; ---; 119, 136, 358	Rosicky Rothschild Dampf	1944 1915 1926
<i>garei</i> <i>garei</i> Rothschild	---; ---; 84, 98, 108, 118, 136, 272	da Costa Lima & Hathaway	1946
<i>garei</i> <i>islandicus</i> Wagner	---; ---; 124 ---; ---; 141	Freeman da Costa Lima & Hathaway	1950 1946
<i>glaphyrus</i> Dampf	---; ---; 358	da Costa Lima & Hathaway	1946
<i>hirundinis</i> (Curtis)	---; ---; 45, 98, 119, 136, 155, 300, 301	da Costa Lima & Hathaway	1946
	---; ---; 88	Rosicky	1944
	---; ---; 124	Freeman	1950
	---; ---; 348, 358	Dampf	1926
<i>hirundinis</i> <i>hirundinis</i> Curtis	---; ---; 119	Eichler	1938
<i>laetus</i> Jordan & Rothschild	---; ---; 301	Jordan & Rothschild	1920
<i>laverani</i> Rothschild	---; ---; 109, 119, 246, 269, 301	Dampf	1926
<i>londiniensis</i> Rothschild	---; ---; 87, 125, 155, 246	Jordan & Rothschild	1921 c
	---; ---; 98, 272	Rothschild	1915
	---; ---; 119	Dampf	1926
<i>lunatus</i> Jordan & Rothschild	---; ---; 109, 300, 301	da Costa Lima & Hathaway	1946
<i>marinoi</i> (Wagner & Ioff)	---; ---; 333	Wagner & Ioff	1926

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CERATOPHYLLUS</i>			
<i>melis</i> Walker	---; ---; 98, 152	Rothschild	1915
<i>microti</i> Nordberg	---; ---; 108	da Costa Lima & Hathaway	1946
<i>mokraeckyi</i> Wagner	---; ---; 255	Ioff	1928 +
<i>mustelae</i> Wagner	---; ---; 58	Buresh	1925
	---; ---; 98, 119, 136, 301, 358	Dampf	1926
	---; ---; 124	Bacot	1919
	---; ---; 272	Rothschild	1915
<i>palmeni</i> Nordberg	---; ---; 108	da Costa Lima & Hathaway	1946
<i>penicilliger</i> (Grube)	---; ---; 34, 155	Jordan	1931 a
	---; ---; 88	Jordan	1932
	---; ---; 98, 109, 140, 228, 272, 301	Dampf	1926
	---; ---; 356	Jordan	1932
<i>phaulius</i> Rothschild	---; ---; 34	da Costa Lima & Hathaway	1946
<i>pullatus</i> Jordan & Rothschild	---; ---; 301	da Costa Lima & Hathaway	1946
<i>rectangulatus</i> Wahlgren	---; ---; 228	Jordan	1932 a
<i>rossittensis</i> Dampf	---; ---; 119	Eichler	1938
	---; ---; 124	Freeman	1950
	---; ---; 358	Dampf	1926
<i>rothschildi</i> Waterston	---; ---; 272, 301	Jordan & Rothschild	1920
<i>rusticus</i> Wagner	---; ---; 34	Peus	1938
	---; ---; 98, 108, 119, 301, 333	da Costa Lima & Hathaway	1946

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CERATOPHYLLUS</i> <i>rusticus</i> Wagner (cont.)	---; ---; 109, 358 ---; ---; 124	Dampf Freeman	1926 1950
<i>sciurorum</i> (Schrank)	---; ---; 34, 83, 109, 119, 136, 140, 155, 300, 301, 358 ---; ---; 98, 152, 272	Dampf Rothschild	1926 1915
<i>simplex</i> Wagner	---; ---; 255	Wagner & Ioff	1926
<i>spinoaus</i> Wagner	---; ---; 119	da Costa Lima & Hathaway	1946
<i>styx</i> Rothschild	---; ---; 98, 119, 358 ---; ---; 108, 136, 300, 301 ---; ---; 124	Dampf da Costa Lima & Hathaway Freeman	1926 1946 1950
<i>styx</i> <i>styx</i> Rothschild	---; ---; 119	Eichler	1938
<i>susinus</i> Jordan & Rothschild	---; ---; 255	Jordan & Rothschild	1921b
<i>trochili</i> (Dale)	---; ---; 98	da Costa Lima & Hathaway	1946
<i>turbidus</i> Rothschild	---; ---; 109 ---; ---; 301	Jordan Jordan & Rothschild	1931 1920
<i>uralensis</i> Wagner	---; ---; 119, 300, 301, 358	Dampf	1926
<i>vagabundus</i> (Bohemian)	---; ---; 98, 272, 296, 300 ---; ---; 119 ---; ---; 124 ---; ---; 272	Dampf Eichler Freeman Rothschild	1926 1938 1950 1915

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CERATOPHYLLUS vagabundus</i> (Bohemian) (cont.)	---; ---; 301 ---; ---; 356	Jordan & Rothschild Seguy	1920 1944
<i>vagabundus inularis</i> Rothschild	---; ---; 98, 272 ---; ---; 124	da Costa Lima & Hathaway Freeman	1946 1950
<i>vagabundus alpestris</i> Jordan	---; ---; 301	da Costa Lima & Hathaway	1946
<i>vagabundus vagabundus</i> (Bohemian)	---; ---; 34, 84, 98, 108, 272, 296, 300, 301	da Costa Lima & Hathaway	1946
<i>viscivorus</i> (Dale)	---; ---; 98	da Costa Lima & Hathaway	1946
<i>walkeri</i> Rothschild	---; ---; 98, 272 ---; ---; 109, 358	Rothschild Dampf	1915 1926
<i>waterstoni</i> Jordan	---; ---; 272, 301	Dampf	1926
<i>wickhami</i> Baker	---; ---; 98	Sikes	1930
<i>CHAETOPSYLLA globiceps</i> (Taschenberg)	---; ---; 88, 255 ---; ---; 92, 108, 136, 228, 300, 333 ---; ---; 119, 140, 358	Hopkins & Rothschild da Costa Lima & Hathaway Dampf	1956 1946 1926
<i>homoea</i> Rothschild	---; ---; 301	Ioff & Tiflow	1934
<i>homoea homoea</i> Rothschild	---; ---; 301	Hopkins & Rothschild	1956
<i>matina</i> (Jordan)	---; ---; 109	Hopkins & Rothschild	1946

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CHAETOPSYLLA</i> <i>matina</i> (Jordan) (cont.)	---; ---; 295	da Costa Lima & Hathaway	1946
	---; ---; 348	Seguy	1944
<i>rothschildi</i> Kohaut	---; ---; 109, 140, 333	da Costa Lima & Hathaway	1946
	---; ---; 255	Hopkins & Rothschild	1956
<i>trichosa</i> Kohaut	---; ---; 108, 119, 136, 140, 244, 300, 301, 358	Dampf	1926
	---; ---; 333	da Costa Lima & Hathaway	1946
<i>trichosa</i> <i>hispanica</i> Gil Collado	---; ---; 295	Gil Collado	1948 +
<i>trichosa</i> <i>trichosa</i> Kohaut	---; ---; 88, 92, 109, 119, 140, 228, 255, 301	Hopkins & Rothschild	1956
<i>tuberculaticeps</i> <i>tuberculaticeps</i> (Bezzii)	---; ---; 109, 228	Hopkins & Rothschild	1956
<i>CITELLOPHILUS</i> <i>danubianus</i> (Rothschild)	---; ---; 58, 255	da Costa Lima & Hathaway	1946
<i>martinoi</i> (Rothschild)	---; ---; 333	da Costa Lima & Hathaway	1946
<i>occidentis</i> Jordan	---; ---; 109	Seguy	1944
<i>simplex</i> (Wagner)	---; ---; 255	da Costa Lima & Hathaway	1946
<i>teaphorum</i> (Wagner)	---; ---; 336	Liu	1936
<i>CORRODOPSYLLA</i> <i>birulai</i> Ioff	---; ---; 108, 355	da Costa Lima & Hathaway	1946
	---; ---; 228	Jordan	1932 c

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CTENOCEPHALIDES</i> <i>canis</i> (Curtis)	---; ---; 34, 87, 88, 108, 109, 119, 125, 136, 140, 152, 155, 255, 269, 272, 295, 301, 331, 333	Hopkins & Rothschild	1953
	---; ---; 84°	Anonymous	1944 e
	---; occasionally bites man; 88°	Anonymous	1944 k
	---; in houses; 98	Wilson	1946
	---; ---; 124	Freeman	1950
	---; ---; 193	Adler & Theodor	1932
	---; ---; 244	Anonymous	1945 a
	---; common; 300	Anonymous	1944 f
	---; ---; 336°	Smart	1943
<i>felis</i> (Bouché)	---; ---; 84°	Anonymous	1944 l
	---; occasionally bites man; 88°	Anonymous	1944 k
	---; ---; 119	Anonymous	1944
	---; ---; 125	Anonymous	1944 c
	---; ---; 136	Spoon	1935
	---; ---; 140	Anonymous	1945
	---; ---; 155	Anonymous	1945 b
	---; ---; 244	Anonymous	1945 a
	---; ---; 255	Anonymous	1944 d
	---; common; 300	Anonymous	1944 f
	---; ---; 333	Anonymous	1944 j
<i>felis</i> <i>felis</i> (Bouché)	---; ---; 73, 87, 88, 98°, 109, 119, 125, 136°, 140, 152, 155, 246, 255, 269, 301, 333, 358	Hopkins & Rothschild	1953
	---; ---; 108, 141	da Costa Lima & Hathaway	1946
	---; ---; 124	Freeman	1950
	---; cosmopolitan; 295	Gil Collado	1948 +
	---; ---; 336°	Smart	1943
<i>CTENOCEPHALUS</i> <i>agyrtes</i> Heiler	---; ---; 98	Pavlovskii	1927

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CTENOCEPHALUS</i> <i>canis</i> (Curtis)	---; ---; 34	Anonymous	1944 h
	---; ---; 98, 155 (On man)	Pavlovskii	1927
	---; ---; 109	Hirst	1927
	---; intermediate host of <i>Dipylidium caninum</i> ; 119. ---; ---, 343*	Ullrich	1939
	---; occasionally bites man; 124°	Harvey & Hill	1947
	---; ---; 125	Partazis	1932
	---; ---; 301	Jordan & Rothschild	1920
<i>fasciatus</i> Bosc d'Antic	---; ---; 98	Pavlovskii	1927
<i>felis</i> Bouché	---; ---; 34	Anonymous	1944 h
	---; ---; 98, 109	Hirst	1927 +
	---; ---; 119°	Dampf	1926
	---; carrier of plague; 124	Bacot	1919
	---; occasionally bites man; 124°	Harvey & Hill	1947
	---; ---; 125	Waterston	1918
	---; ---; 301	Jordan & Rothschild	1920
<i>goniocephalus</i> Taschenberg	---; ---; 119	Ullrich	1939
<i>serraticeps</i> <i>canis</i>	---; ---; 278	Basile	1913

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CTENOPHTHALMUS</i>			
<i>adetus</i> Jordan & Rothschild	---; ---; 301	Jordan & Rothschild	1920
<i>agyrtes</i> (Heller)	---; ---; 34, 119, 136, 140, 301, 358 ---; all year, especially Feb. and March; 98 ---; carrier of plague; 124 ---; ---; 152, 272	Dampf Nuttall & Strickland Bacot Rothschild	1926 1913 1919 1915
<i>agyrtes</i> <i>agyrtes</i> Heller	---; ---; 34, 119, 136, 301 ---; ---; 88 ---; ---; 92, 108, 141, 228, 300	Jordan & Rothschild Rosicky Jordan	1920 1944 1932
<i>agyrtes</i> <i>agyrtoides</i> Wahlgren	---; ---; 119 ---; ---; 228	Eichler da Costa Lima & Hathaway	1938 1946
<i>agyrtes</i> <i>baeticus</i> Rothschild	---; ---; 246 ---; ---; 295	da Costa Lima & Hathaway Gil Collado	1946 1948 +
<i>agyrtes</i> <i>bosnicus</i> Wagner	---; ---; 333	Wagner	1931
<i>agyrtes</i> <i>celticus</i> Jordan & Rothschild	---; ---; 98, 152 ---; ---; 109 ---; ---; 272	Thompson da Costa Lima & Hathaway Elton	1935 1946 1934
<i>agyrtes</i> <i>eurous</i> Jordan & Rothschild	---; ---; 140	da Costa Lima & Hathaway	1946
<i>agyrtes</i> <i>graecus</i> Jordan	---; ---; 58, 125, 333	da Costa Lima & Hathaway	1946

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CTENOPHTHALMUS</i>			
<i>agyrtes hispanicus</i> Jordan	---; ---; 295	da Costa Lima & Hathaway	1946
<i>agyrtes impavidus</i> Jordan	---; ---; 34, 155 ---; ---; 356	Jordan Seguy	1931 1944
<i>agyrtes kraljevensis</i> Wagner	---; ---; 333	Wagner	1931
<i>agyrtes nobilis</i> (Rothschild)	---; ---; 98 ---; ---; 124	da Costa Lima & Hathaway Freeman	1946 1950
<i>agyrtes ohridanus</i> Wagner	---; ---; 333	da Costa Lima & Hathaway	1946
<i>agyrtes oreadis</i> Jordan & Rothschild	---; ---; 301	Jordan & Rothschild	1920
<i>agyrtes provincialis</i> Rothschild	---; ---; 109, 301 ---; ---; 246, 295	Jordan & Rothschild da Costa Lima & Hathaway	1920 1946
<i>agyrtes sardiniensis</i> Ioff	---; ---; 269	da Costa Lima & Hathaway	1946
<i>agyrtes serbicus</i> Wagner	---; ---; 333	Wagner	1931
<i>agyrtes verbanus</i> Jordan & Rothschild	---; ---; 155, 301	da Costa Lima & Hathaway	1946
<i>andorrensis</i> Smit	---; ---; 12	Smit	1960
<i>apertus</i> Jordan & Rothschild	---; ---; 109	da Costa Lima & Hathaway	1946
<i>arvernus</i> Jordan	---; ---; 12, 109, 295	Smit	1960

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CTENOPHTHALMUS assimilis</i> Taschenberg	---; ---; 34 ---; ---; 58 ---; ---; 88 ---; ---; 92, 119, 136, 140, 301, 358	Wagner Buresh Rosicky Dampf	1936 1925 1944 1926
<i>bisocfoldentatus</i> (Kolenati)	---; ---; 34 ---; ---; 88 ---; ---; 98, 272 ---; ---; 108, 119, 140, 155, 301	Wagner Rosicky Rothschild da Costa Lima & Hathaway	1936 1944 1915 1946
	---; ---; 124 ---; ---; 136, 358	Freeman Dampf	1950 1926
<i>caucasica</i> Taschenberg	---; ---; 140, 333	Wagner	1936
<i>congener</i> Rothschild	---; ---; 34, 155 ---; ---; 119, 136, 244, 301 ---; ---; 333	Jordan Jordan & Rothschild Wagner	1931 a 1920 1931
<i>fasciatus</i>	---; ---; 98	Pavlovskii	1927
<i>gil-colladoi</i> Wagner	---; ---; 295	da Costa Lima & Hathaway	1946
<i>gratus</i> Jordan & Rothschild	---; ---; 125	Jordan & Rothschild	1920
<i>heselhaussi</i> (Oudemans)	---; ---; 136	da Costa Lima & Hathaway	1946
<i>jeanneli</i> Jordan	---; ---; 255	Jordan	1929
<i>nivalis</i> Rothschild	---; ---; 109, 301	Jordan & Rothschild	1920
<i>nivalis</i> <i>cervinus</i> Jordan & Rothschild	---; ---; 301, 333	da Costa Lima & Hathaway	1946
<i>nivalis</i> <i>dolomiticus</i> Jordan	---; ---; 34	Jordan	1931 a

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CTENOPHTHALMUS</i>			
<i>nivalis</i>			
<i>eugeniae</i>			
Wagner	---; ---; 333	da Costa Lima & Hathaway	1946
<i>nivalis</i>			
<i>nifetodes</i>			
Wagner	---; ---; 333	Wagner	1933
<i>nivalis</i>			
<i>nivalis</i>			
Rothschild	---; ---; 109, 301, 333	da Costa Lima & Hathaway	1946
<i>obtusus</i>			
Jordan & Rothschild	---; ---; 136, 140	Dampf	1926
<i>orientalis</i>			
(Wagner)	---; ---; 88, 140	Rosicky	1944
	---; ---; 119, 136	Dampf	1926
	---; ---; 333	Wagner	1931
<i>orphilus</i>			
Jordan & Rothschild	---; ---; 301	Jordan & Rothschild	1923
	---; ---; 333	Wagner	1938
<i>orphilus</i>			
<i>orphilus</i>			
Jordan & Rothschild	---; ---; 301	da Costa Lima & Hathaway	1946
<i>orphilus</i>			
<i>sklavinus</i>			
Wagner	---; ---; 301	da Costa Lima & Hathaway	1946
<i>pentacanthus</i>			
Rothschild	---; ---; 98	Strickland & Merriman	1913
<i>ruris</i>			
Jordan	---; ---; 255	Jordan	1929
<i>ruris</i>			
<i>karavani</i>			
Wagner	---; ---; 255, 333	Wagner	1936 a
<i>russulae</i>			
Jordan & Rothschild	---; ---; 269	Argiropulo	1937 +
<i>russulae</i>			
<i>ducis</i>			
Jordan	---; ---; 269	da Costa Lima & Hathaway	1946
<i>cavii</i>			
Jordan & Rothschild	---; ---; 155	Jordan & Rothschild	1921

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CTENOPHTHALMUS</i>			
<i>secundus</i>			
<i>secundus</i> (Wagner)	---; ---; 255, 333	da Costa Lima & Hathaway	1946
<i>sklavinus</i> Wagner	---; ---; 333	Wagner	1933
<i>solutus</i> Jordan & Rothschild	---; ---; 88, 155, 301	Rosicky	1944
<i>uncinatus</i> (Wagner)	---; ---; 119	Seguy	1944
	---; ---; 228	Dampf	1926
	---; ---; 355	Wagner	1933 a
<i>unidentatus</i> Kolenati	---; ---; 336	da Costa Lima & Hathaway	1946
<i>vicarius</i> Jordan & Rothschild	---; ---; 255	Jordan & Rothschild	1921
<i>CTENOPSYLLA</i>			
<i>musculi</i> Dugés	---; ---; 98	Strickland & Merriman	1913
	---; ---; 109	Marcandier & Pirot	1932
	---; ---; 193	Zammit	1918
<i>CTENOPSYLLUS</i>			
<i>bidentatus</i> Kolenati	---; ---; 109, 119, 301	Rosicky	1944
<i>fallax</i> Rothschild	---; ---; 34, 333	Wagner	1931
	---; ---; 109, 301	Seguy	1944
<i>sciurobius</i> Wagner	---; ---; 333	Wagner	1935 b
<i>segnis</i> Schönheer	---; ---; 58	Wagner	1934
	---; ---; 109	Seguy	1944
	---; ---; 119	Sgonina	1937
<i>sylvaticus</i> Meinert	---; ---; 88, 92, 98	Rosicky	1944
<i>taschenbergi</i> Wagner	---; ---; 119	Seguy	1944
	---; ---; 333	Wagner	1931

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITAT; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>DASIPSYLLUS gallinulae</i> Dale	---; ---; 88	Rosicky	1944
	---; ---; 98, 136, 246, 301	Peus	1938
	---; ---; 119	Eichler	1938
<i>gallinulae</i> <i>gallinulae</i> (Dale)	---; ---; 98, 136, 246, 272, 301	da Costa Lima & Hathaway	1946
	---; ---; 124	Freeman	1950
<i>DORATOPSYLLA eupis</i> Jordan & Rothschild	---; ---; 34, 140, 301, 333	da Costa Lima & Hathaway	1946
	---; ---; 155	Jordan	1931 a
<i>dasyconemus</i> (Rothschild)	---; ---; 58	Buresh	1925
	---; ---; 88, 358	Dampf	1926
	---; ---; 98, 272	Rothschild	1915
	---; ---; 109, 119, 140, 300, 301, 333	da Costa Lima & Hathaway	1946
	---; ---; 124	Freeman	1950
<i>dasyconemus bifida</i> Jurkina	---; ---; 88	Rosicky	1957
<i>dasyconemus</i> <i>dasyconemus</i> Rothschild	---; ---; 88, 119	Rosicky	1957
<i>dasyconemus tiflovi</i> Rosicky	---; ---; 88	Rosicky	1957
<i>fennica</i> Nordberg	---; ---; 108	Wagner	1938
<i>gallinacea</i> (Westwood)	---; ---; 87	Hopkins & Rothschild	1953
	---; ---; 295	Gil Collado	1948 +
<i>ECHIDNOPHAGA gallinacea</i> <i>gallinacea</i> (Westwood)	---; ---; 336	da Costa Lima & Hathaway	1946

TABLE I - FLEAS (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ECHIDNOPHAGA</i> <i>murina</i> (Tiraboschi)	---; ---; 125 ---; ---; 155, 301	Hopkins & Rothschild	1953
		da Costa Lima & Hathaway	1946
<i>EUCPENOPHTHALMUS</i> <i>assimilis</i> (Taschenberg)	---; ---; 119, 136, 301	da Costa Lima & Hathaway	1946
<i>congener</i> (Rothschild)	---; ---; 34, 119, 136, 301, 333	da Costa Lima & Hathaway	1946
<i>gratus</i> (Jordan & Rothschild)	---; ---; 125	da Costa Lima & Hathaway	1946
<i>obtusus</i> (Jordan & Rothschild)	---; ---; 140	da Costa Lima & Hathaway	1946
<i>orientalis</i> (Wagner)	---; ---; 119, 136, 140, 300, 301, 333	da Costa Lima & Hathaway	1946
<i>savii</i> (Jordan & Rothschild)	---; ---; 155	da Costa Lima & Hathaway	1946
<i>uncinatus</i> (Wagner)	---; ---; 108, 228, 333	da Costa Lima & Hathaway	1946
<i>FRONTOPSYLLA</i> <i>frontalis</i> <i>frontalis</i> (Rothschild)	---; ---; 34	da Costa Lima & Hathaway	1946
<i>laeta</i> (Jordan & Rothschild)	---; ---; 301	da Costa Lima & Hathaway	1946
<i>lapponica</i> (Nordberg)	---; ---; 108	Wagner	1938
<i>HECTOPSYLLA</i> <i>psittaci</i> Frauenfeld	---; ---; 98, 136 ---; ---; 119 ---; ---; 124	Hopkins & Rothschild	1953
		Dampf	1926
		Freeman	1950
<i>HOPLOPSYLLUS</i> <i>glacialis</i> Taschenberg	---; ---; 125	Jordan	1932

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>HOPLOPSYLLUS</i> <i>glacialis</i> <i>glacialis</i> (Taschenberg)	---; ---; 26	da Costa Lima & Hathaway	1946
<i>HYSTRICHOPSYLLA</i> <i>obtusiceps</i> Ritsema	---; ---; 336	Baker	1895d
<i>talpae</i> (Curtis)	---; ---; 34	Wagner	1936
	---; ---; 58	Buresh	1925
	---; ---; 88	Jordan	1932 c
	---; ---; 92, 98, 108, 109, 119, 140, 155, 228, 272, 300, 301, 333	da Costa Lima & Hathaway	1946
	---; ---; 124	Freeman	1950
	---; ---; 136, 358	Dampf	1926
	---; ---; 152	Thompson	1935
<i>talpae</i> <i>orientalis</i> Smit	---; ---; 34, 58, 88, 92, 119, 155, 228, 244, 255, 301	Hopkins & Rothschild	1962
<i>talpae</i> <i>talpae</i> (Curtis)	---; ---; 34, 73, 88, 98, 109, 119, 136, 184, 244, 272, 295, 301, 331	Hopkins & Rothschild	1962
<i>ISCHNOPSYLLUS</i> <i>elongatus</i> (Curtis)	---; ---; 34, 58, 92, 98, 119, 136, 140, 155, 272	Hopkins & Rothschild	1956
	---; ---; 98, 119, 136, 140, 155, 255, 333	da Costa Lima & Hathaway	1946
	---; ---; 124	Freeman	1950
	---; ---; 358	Dampf	1926
<i>hexactenus</i> (Kolenati)	---; ---; 45, 88, 98, 109, 140, 152, 155, 255	Hopkins & Rothschild	1956
	---; ---; 92, 119, 136, 300, 301, 358	Dampf	1926
<i>hexactenus</i> <i>hexactenus</i> (Kolenati)	---; ---; 92, 119, 136, 300, 301, 333	da Costa Lima & Hathaway	1946
	---; ---; 124	Freeman	1950
<i>hexactenus</i> <i>petropolitanus</i> (Wagner)	---; ---; 119	da Costa Lima & Hathaway	1946
	---; ---; 301	Jordan & Rothschild	1920

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ISCHNOPSYLLUS</i> <i>hispanicus</i> Jordan	---; ---; 295	da Costa Lima & Hathaway	1946
<i>intermedius</i> (Rothschild)	---; ---; 34, 45, 58, 88, 92, 98, 109, 119, 125, 136, 140, 155, 244, 255, 269, 295, 301	Hopkins & Rothschild	1956
	---; ---; 124	Freeman	1950
	---; ---; 246	da Costa Lima & Hathaway	1946
<i>obscurus</i> (Wagner)	---; ---; 228, 255	Hopkins & Rothschild	1956
<i>octactenus</i> (Kolenati)	---; ---; 58, 92, 98, 109, 119, 125, 136, 140, 152, 155, 269, 272, 295, 301, 331	Hopkins & Rothschild	1956
	---; ---; 88	Rosicky	1944
	---; ---; 124	Freeman	1950
	---; ---; 300, 303, 333	da Costa Lima & Hathaway	1946
	---; ---; 358	Dampf	1926
<i>simplex</i> Rothschild	---; ---; 98, 331	Rothschild	1915
	---; ---; 119, 136, 301	Dampf	1926
<i>simplex</i> <i>mysticus</i> Jordan	---; ---; 34, 228	da Costa Lima & Hathaway	1946
<i>simplex</i> <i>simplex</i> Rothschild	---; ---; 45, 88, 98, 109, 119, 136, 301, 331	Hopkins & Rothschild	1956
	---; ---; 124	Freeman	1950
<i>unipectinata</i> Taschenberg	---; ---; 301	Jordan & Rothschild	1920
<i>variabilis</i> (Wagner)	---; ---; 58, 88, 109, 125, 140, 155, 255, 301, 333	Hopkins & Rothschild	1956
	---; ---; 119	Dampf	1926
<i>LEPTOPSYLLA</i> <i>bidendata</i> (Kolenati)	---; ---; 34, 109, 119, 301, 333	da Costa Lima & Hathaway	1946
	---; ---; 88, 348	Jordan	1932 a

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>LEPTOPSYLLA fallax</i> (Rothschild)	---; ---; 34, 109, 301, 333 ---; ---; 58 ---; ---; 155	da Costa Lima & Hathaway Buresh Jordan	1946 1925 1931 a
<i>musculi</i> (Dugès)	---; ---; 58 ---; ---; 98, 272 ---; ---; 109 ---; carrier of plague; 124° ---; ---; 152 ---; ---; 301 ---; ---; 333	Rothschild Hirst Bacot Thompson Jordan & Rothschild Babic	1915 1927 1919 1935 1920 1934
<i>sciurobius</i> Wagner	---; ---; 333	da Costa Lima & Hathaway	1946
<i>segnis</i> (Schönherr)	---; ---; 98, 108, 109, 119, 136, 246, 301, 333 ---; ---; 124 ---; ---; 125 ---; ---; 295 ---; ---; 300	da Costa Lima & Hathaway Freeman Lepine et al. Gil Collado de Meillon et al.	1946 1950 1932 1948 + 1961
<i>silvatica</i> Meinert	---; ---; 58, 88, 92, 108, 119, 228 ---; ---; 88	Jordan	1932 a
<i>silvatica</i> <i>silvatica</i> (Meinert)	---; ---; 92, 98, 108, 301	da Costa Lima & Hathaway	1946
<i>silvatica</i> <i>spectabilis</i> (Rothschild)	---; ---; 98, 155 ---; ---; 124	da Costa Lima & Hathaway Freeman	1946 1950
<i>spectabilis</i> (Rothschild)	---; ---; 98, 272 ---; ---; 155	Rothschild Dampf	1915 1926

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>LEPTOPSYLLA taschenbergi</i> Wagner	---; ---; 119, 333 ---; ---; 295	da Costa Lima & Hathaway	1946
<i>taschenbergi amitina</i> Jordan & Rothschild	---; ---; 12, 109	Smit	1960
<i>videntata</i> (Kolenati)	---, ---; 109, 301, 358	Dampf	1926
<i>MALARAEUS penicilliger</i> (Grube)	---; ---; 34 ---; ---; 98	Wagner	1936
<i>penicilliger</i> <i>penicilliger</i> (Grube)	---; ---; 124	Thompson	1939
<i>MEGABOTHRIS rectangulatus</i> (Wahlgren)	---; ---; 98 ---; ---; 124 ---; infected with <i>Bacterium tularensis</i> ; 300	Freeman	1950
<i>turbidus</i> (Rothschild)	---; ---; 58, 98, 136, 301 ---; ---; 88 ---; ---; 108 ---; ---; 124	Olin	1942
<i>walkeri</i> (Rothschild)	---; ---; 98 ---; ---; 119 ---; ---; 124	Seguy	1944
<i>MESOPSYLLA hebes</i> Jordan & Rothschild	---; ---; 124 ---; ---; 336	Rosicky	1944
<i>MONOPSYLLUS sciurorum</i> Schrank	---; ---; 88 ---; ---; 98, 331 ---; ---; 119 ---; ---; 333	Freeman	1938
		da Costa Lima & Hathaway	1946
		Rosicky	1944
		Thompson	1935
		Eichler	1938
		Wagner	1934

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>MONOPSYLLUS</i> <i>sciurorum</i> <i>asiaticus</i> Ioff	---; ---; 108	da Costa Lima & Hathaway	1946
<i>sciurorum</i> <i>bolivari</i> Gil Collado	---; -- ; 295	Gil Collado	1948 +
<i>sciurorum</i> <i>sciurorum</i> (Schrank)	---; ---; 34, 98, 108, 109, 119, 125, 136, 140, 155, 300, 301	da Costa Lima & Hathaway	1946
	---; ---; 124	Freeman	1950
	---; ---; 295	Smit	1960
<i>tamias</i> (Wagner)	---; ---; 108	da Costa Lima & Hathaway	1946
<i>MYOXOPSYLLA</i> <i>laverani</i> (Rothschild)	---; ---; 12, 295	Smit	1960
	---; ---; 109, 246, 269, 301	da Costa Lima & Hathaway	1946
	---; ---; 119	Eichler	1938
<i>NEOPSYLLA</i> <i>pitymydis</i> Zavatt	---; ---; 155	Jordan	1921
<i>pleskei</i> <i>rossica</i> Ioff & Argyropulo	---; ---; 336	da Costa Lima & Hathaway	1946
<i>setosa</i> <i>setosa</i> (Wagner)	---; ---; 255, 333	da Costa Lima & Hathaway	1946
<i>setosa</i> <i>spinea</i> Rothschild	---; ---; 58, 255	Hopkins & Rothschild	1962
<i>NOSOPSYLLUS</i> <i>fasciatus</i> (Bosc D'Antic)	---; ---; 34	Wagner	1936
	---; in harbor areas; 84*	Anonymous	1944 l
	---; occasionally attacks man; 88°	Anonymous	1944 k
	---; ---; 88	Rosicky	1944
	---; ---; 98, 331	Thompson	1935
	---; ---; 109°	Seguy	1944
	---; ---; 109	Smit	1960

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>NOSOPSYLLUS</i> <i>fasciatus</i> (Bosc D'Antic) (cont.)	---; ---; 119 ---; readily bites man; 124° ---; ---; 124 ---; ---; 125 ---; ---; 136 ---; ---; 140 ---; ---; 152 ---; ---; 244 ---; ---; 255 ---; ---; 295 ---; ---; 301 ---; ---; 333 ---; ---; 336*	Anonymous Harvey & Hill Freeman Anonymous Anonymous Anonymous Anonymous Anonymous Anonymous Anonymous Anonymous Anonymous Anonymous Anonymous Gil Collado Anonymous Anonymous Smart	1944 1947 1950 1944c 1944b 1945 19461 1945a 1944d 1948 + 1944g 1944j 1943
<i>londiniensis</i> (Rothschild)	---; ---; 98, 155, 246, 301, 333 ---; ---; 109 ---; ---; 119 ---; ---; 124	da Costa Lima & Hathaway Seguy Peus Freeman	1946 1944 1938 1950
<i>mokrzeckyi</i> (Wagner)	---; ---; 255, 333	da Costa Lima & Hathaway	1946
<i>NYCTERIDOPSYLLA</i> <i>ancylurus</i> Jordan	---; ---; 109, 155, 301	da Costa Lima & Hathaway	1946
<i>dictena</i> (Kolenati)	---; ---; 88, 119, 255 ---; ---; 140, 301 ---; ---; 244	Hopkins & Rothschild da Costa Lima & Hathaway Seguy	1956 1946 1944

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>NYCTERIODOPSYLLA</i>	---	Dampf	1926
<i>eusarca</i>	---	Seguy	1944
Dampf	---	Rosicky	1944
	---	Hopkins & Rothschild	1956
<i>eusarea</i>	---	da Costa Lima & Hathaway	1946
<i>eusarea</i>	---	Buresh	1925
Dampf	---	Jordan & Rothschild	1920
<i>eusarca</i>	---	da Costa Lima & Hathaway	1946
<i>major</i>	---		
Rothschild	---	Freeman	1950
<i>levantina</i>	---	da Costa Lima & Hathaway	1946
Jordan	---		
<i>longiceps</i>	---	da Costa Lima & Hathaway	1946
Rothschild	---	Dampf	1926
	---	Freeman	1950
	---	Gil Collado	1948 +
<i>pentactena</i>	---	Hopkins & Rothschild	1956
(Kolenati)	---	Rosicky	1944
	---	Dampf	1926
<i>pentactenus</i>	---	Rosicky	1944
(Kolenati)	---	Seguy	1944
<i>ODONTOPSYLLUS</i>			
<i>quirosi</i>	---	da Costa Lima & Hathaway	1946
(Gil Collado)	---		
<i>ORCHOPEAS</i>			
<i>howardii</i>	---	da Costa Lima & Hathaway	1946
(Baker)	---		

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ORCHOPEAS</i>	---	Thompson	1939
<i>wickhami</i> (Baker)	---; ---; 124	Freeman	1950
<i>ORNITHOPSYLLA</i>	---	da Costa Lima	
<i>laetitiae</i>	---	& Hathaway	1946
Rothschild	---	Freeman	1950
	---	Hopkins &	
	152, 271, 331	Rothschild	1953
<i>OROPSYLLA</i>	---	Liu	1936
<i>silantiewi</i>	---		
<i>silantiewi</i>	---		
(Wagner)	336		
<i>PALAEOPSYLLA</i>	---	da Costa Lima	
<i>atlantica</i>	246	& Hathaway	1946
Jordan &	---	Gil Collado	1948 +
Rothschild	295		
<i>cisalpina</i>	---	Jordan &	
Jordan &	301	Rothschild	1920
Rothschild			
<i>iberica</i>	---	Jordan &	
Jordan &	295	Rothschild	1921
Rothschild			
<i>klebesiana</i>	---	da Costa Lima	
Dampf	119	& Hathaway	1946
<i>kohauti</i>	---	da Costa Lima	
Dampf	34, 140, 301, 333	& Hathaway	1946
	---	Wagner	1933 b
	58		
	---	Rosicky	1944
	88, 119, 358		
	---	Rothschild	1915
	98, 272		
	---	Freeman	1950
	124		
	---	Jordan	1931 a
	155		
<i>minor</i>	---	da Costa Lima	
(Dale)	98, 109, 119, 136, 301	& Hathaway	1946
	---	Freeman	1950
	124		
	---	Rothschild	1915
	272		
<i>similis</i>	---	Wagner	1936
Dampf	34		
	---	Rosicky	1944
	88		
	---	da Costa Lima	
	119, 333	& Hathaway	1946

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PALAEOPSYLLA</i> <i>similis</i> Dampf (cont.)	---; ---; 358	Dampf	1926
<i>sorecis</i> (Dale)	---; ---; 88	Rosicky	1944
	---; ---; 98, 272	Rothschild	1915
	---; ---; 136, 140, 301, 358	Dampf	1926
	---; ---; 155	Jordan	1931 b
<i>sorecis</i> <i>sorecis</i> (Dale)	---; ---; 34, 98, 108, 119, 136, 140, 301	da Costa Lima & Hathaway	1946
	---; ---; 124	Freeman	1950
<i>steini</i> Jordan	---; ---; 88	Jordan	1932 c
<i>PALAOCTENOPHTHALMUS</i> <i>rettigi</i> (Rothschild)	---; ---; 255	da Costa Lima & Hathaway	1946
<i>PARACALLOPSYLLA</i> <i>waterstoni</i> (Jordan)	---; ---; 124	Freeman	1950
	---; ---; 272, 301	da Costa Lima & Hathaway	1946
<i>PARACERAS</i> <i>melis</i> (Curtis)	---; ---; 98, 108, 119, 136, 140, 301, 358	Dampf	1926
	---; ---; 124	Freeman	1950
	---; ---; 152	Thompson	1935
	---; ---; 295	Gil Collado	1948 +
<i>PARIODONTIS</i> <i>rigenbachi</i> (Rothschild)	---; ---; 295	Gil Collado	1948 +
<i>PULEX</i> <i>avium</i> Taschenberg	---; ---; 119	Baker	1895 a
<i>erinacei</i> Bouché	---; ---; 119	Baker	1895 c
<i>fasciatus</i> Bosc d'Antic	---; ---; 336	Baker	1895 a
<i>globiceps</i> Taschenberg	---; ---; 119, 136	Baker	1895

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PULEX</i> <i>irritans</i> Linnaeus	---; ---; 34°, 58, 87°, 88, 98°, 109°, 119°, 125°, 136°, 140°, 152°, 155°, 228°, 244, 246°, 255, 269°, 272°, 278°, 295°, 301°, 331°, 333°	Hopkins & Rothschild	1953
	---; common during summer months, in hotel rooms, restaurants, and public conveyances; 84°	Anonymous	1944 1
	---; common; 92	Anonymous	1944 e
	---; ---; 108°	Anonymous	1944 f
	---; carrier of plague; 124°	Bacot	1919
	---; common; 124	Harvey & Hill	1947
	---; common; 136	Anonymous	1944 b
	---; abundant; 155	Anonymous	1945 b
	---; ---; 193	Zammit & Alcock	1917
	---; common; 228	Anonymous	1944 a
	---; common; 300	Anonymous	1944 f
<i>irritans</i> <i>irritans</i> Linnaeus	---; ---; 124	Freeman	1950
	---; cosmopolitan; 295	Gil Collado	1948 +
<i>sciurorum</i> Bouché	---; ---; 119	Baker	1895
	---; ---; 301	Galli-Valerio	1925b
<i>RECTOFRONTIA</i> <i>bureschi</i> (Jordan)	---; ---; 58	da Costa Lima & Hathaway	1946
<i>casta</i> (Jordan)	---; ---; 34, 108, 119, 301	da Costa Lima & Hathaway	1946
	---; ---; 88	Rosicky	1944
<i>integella</i> (Jordan & Rothschild)	---; ---; 109	da Costa Lima & Hathaway	1946
<i>isacanthus</i> (Rothschild)	---; ---; 34, 98, 108, 119, 155, 333	da Costa Lima & Hathaway	1946
	---; ---; 124	Freeman	1950

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>RECTOFRONTIA</i>			
<i>mesa</i> Jordan & Rothschild	---; ---; 301	Seguy	1944
<i>pentacanthus</i> (Rothschild)	---; ---; 88 ---; ---; 98, 109, 119, 136, 140, 301 ---; ---; 124 ---; ---; 295	Rosicky da Costa Lima & Hathaway Freeman Gil Collado	1944 1946 1950 1948 +
<i>RHADINOPSYLLA</i>			
<i>bureschi</i> Jordan	---; ---; 58	Jordan	1929
<i>casta</i> Jordan	---; ---; 88, 155 ---; ---; 228 ---; ---; 355	Jordan Jordan Wagner	1932 c 1932 b 1933 a
<i>dolomycis</i> Smit	---; ---; 333	Hopkins & Rothschild	1962
<i>integella</i> Jordan & Rothschild	---; ---; 109	Jordan & Rothschild	1921 a
<i>integella</i> <i>integella</i> Jordan & Rothschild	---; ---; 34, 88, 109, 119, 155, 228, 244, 255, 272, 300, 301	Hopkins & Rothschild	1962
<i>isacantha</i> <i>continentalis</i> Smit	---; ---; 109, 139	Hopkins & Rothschild	1962
<i>isacantha</i> <i>isacantha</i> (Rothschild)	---; ---; 98, 331	Hopkins & Rothschild	1962
<i>isacanthus</i> Rothschild	---; ---; 34 ---; ---; 98, 155	Wagner Dampf	1936 1926
<i>mesa</i> Jordan & Rothschild	---; ---; 301	Hopkins & Rothschild	1962
<i>mesoides</i> Smit	---; ---; 109, 125	Hopkins & Rothschild	1962

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>RHADINOPSYLLA</i> <i>pentacantha</i> (Rothschild)	---; ---; 34, 73, 88, 92, 98, 109, 119, 136, 244, 272, 331	Hopkins & Rothschild	1962
	---; ---; 140	Dampf	1926
<i>pitymydis</i> (Zavattari)	---; ---; 125	Hopkins & Rothschild	1962
<i>sobrina</i> Peus	---; ---; 125	Hopkins & Rothschild	1962
<i>strouhalii</i> Smit	---; ---; 34	Hopkins & Rothschild	1962
<i>ukrainica</i> Ioff	---; ---; 336	da Costa Lima & Hathaway	1946
<i>unipectinata</i> (Taschenberg)	---; ---; 109	Seguy	1944
	---; ---; 140, 155, 301	Rosicky	1944
	---; ---; 333	Wagner	1931
<i>RHINOLOPHOPSYLLA</i> <i>unipectinata</i> (Taschenberg)	---; ---; 109	Seguy	1944
	---; ---; 140, 155, 301	Rosicky	1944
	---; ---; 333	Wagner	1931
<i>unipectinata</i> <i>unipectinata</i> (Taschenberg)	---; ---; 45, 58, 109, 125, 136, 140, 155, 255, 269, 295, 301	Hopkins & Rothschild	1956
	---; ---; 333	da Costa Lima & Hathaway	1946
<i>SAPHIOPSYLLA</i> <i>nupera</i> Jordan	---; ---; 34, 109	Rosicky	1944
<i>nupera</i> <i>nupera</i> Jordan	---; ---; 34, 109, 333	da Costa Lima & Hathaway	1946
<i>nupera</i> <i>palina</i> Jordan	---; ---; 34	Wagner	1931
	---; ---; 155	Jordan	1931
<i>SARCOPSYLLA</i> <i>penetrans</i> Kolenati	---; ---; 119°	Peus	1938
<i>SPALACOCYCTENOPHTHALMUS</i> <i>caucasicus</i> (Taschenberg)	---; ---; 333	da Costa Lima & Hathaway	1946
<i>monticola</i> (Kohaut)	---; ---; 333	da Costa Lima & Hathaway	1946

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>SPALOCOCTENOPHTHALMUS</i>			
<i>ruris</i>			
<i>karamani</i> (Wagner)	---; ---; 333	da Costa Lima & Hathaway	1946
<i>ruris</i>			
<i>ruris</i> (Jordan)	---; ---; 255	da Costa Lima & Hathaway	1946
<i>SPILOPSYLLUS</i>			
<i>cuniculi</i> (Dale)	---; ---; 34, 98, 109, 119, 136, 152, 244, 269, 272, 295, 331	Hopkins & Rothschild	1953
	---; ---; 124°	Bacot	1919
	---; ---; 124	Freeman	1950
	---; ---; 155, 301	da Costa Lima & Hathaway	1946
	---; ---; 358	Dampf	1926
<i>STENOPONIA</i>			
<i>tripectinata</i>	---; ---; 155, 255, 295, 333	da Costa Lima & Hathaway	1946
<i>Tiraboschi</i>			
<i>tripectinata</i>			
<i>tripectinata</i> (Tiraboschi)	---; ---; 125, 155, 255, 269	Hopkins & Rothschild	1962
<i>TARSOPOSYLLA</i>			
<i>octodecidmentata</i> (Kolenati)	---; ---; 88	Rosicky	1944
	---; ---; 108, 119, 300, 301, 333	da Costa Lima & Hathaway	1946
	---; ---; 295	Gil Collado	1948 +
<i>TRICHOPOSYLLA</i>			
<i>globiceps</i>	---; ---; 58	Buresh	1925
<i>Taschenberg</i>			
<i>groelandica</i> (Wahlgren)	---; ---; 126	da Costa Lima & Hathaway	1946
<i>homoeus</i>			
<i>Rothschild</i>	---; ---; 301	Jordan & Rothschild	1920
<i>penicilliger</i>			
<i>penicilliger</i> (Grube)	---; ---; 34, 98, 108, 140, 228, 272, 301, 333	da Costa Lima & Hathaway	1946
<i>rectangulata</i>			
<i>(Wagner)</i>	---; ---; 98, 108, 228	da Costa Lima & Hathaway	1946
<i>trichosa</i>			
<i>Kohaut</i>	---; ---; 301	Jordan & Rothschild	1920
<i>tuberculaticeps</i>			
<i>Bezzi</i>	---; ---; 109	Jordan & Rothschild	1920

TABLE 1 - FLEAS (continued)

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TRICHOPOSYLLA</i> <i>turbida</i> (Rothschild)	---; ---; 34, 45, 98, 119, 136, 141, 301, 333	da Costa Lima & Hathaway	1946
<i>walkeri</i> (Rothschild)	---; ---; 98, 108, 109, 119, 272	da Costa Lima & Hathaway	1946
<i>TYPHLOCERAS</i> <i>favosus</i> Jordan & Rothschild	---; ---; 269	Wagner	1933b
<i>favosus</i> <i>asunicus</i> Jordan	---; ---; 269	da Costa Lima & Hathaway	1946
<i>favosus</i> <i>favosus</i> Jordan & Rothschild	---; ---; 155	da Costa Lima & Hathaway	1946
<i>favosus</i> <i>rolandi</i> Jordan	---; ---; 109	da Costa Lima & Hathaway	1946
<i>nupera</i> <i>nupera</i> Jordan	---; ---; 34, 109, 333	da Costa Lima & Hathaway	1946
<i>nupera</i> <i>palina</i> Jordan	---; ---; 34, 333	da Costa Lima & Hathaway	1946
<i>poppei</i> Wagner	---; ---; 98, 109, 119, 125, 136, 152, 271, 272, 301, 331, 333	Hopkins & Rothschild	1962
	---; ---; 124	Freeman	1950
	---; ---; 140	da Costa Lima & Hathaway	1946
<i>TYPHLOPSYLLA</i> <i>assimilis</i> Taschenberg	---; ---; 336	Baker	1895d
<i>dictenus</i> Kolenati	---; ---; 336	Baker	1895d
<i>gracialis</i> Taschenberg	---; ---; 336	Baker	1895d
<i>musculi</i> Duges	---; ---; 336	Baker	1895d

TABLE I - FLEAS (conclusion)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>VERMIPSYLLA strandi</i> Wahlgren	---; ---; 228	da Costa Lima & Hathaway	1946
<i>XENOPSYLLA brasiliensis</i> (Baker)	---; ---; 98	da Costa Lima & Hathaway	1946
	---; ---; 124	Freeman	1950
	---; ---; 331	Hopkins & Rothschild	1953
<i>cheopis</i> (Rothschild)	---; in harbor areas; 84* ---; ---; 98, 109, 119, 125, 136 (Carrier of <i>Hymenolepis nana</i> , bites man)	Anonymous Peus	1944 i 1938
	---; ---; 108**	Anonymous	1944 i
	---; ---; 124*	Bacot	1919
	---; probably transmits typhus from rat to man; 125	Lepine et al.	1932
	---; ---; 152	Anonymous	1946
	---; ---; 155, 331	Hopkins & Rothschild	1953
	---; ---; 193	Zammit	1918
	---; common, occasionally in harbor cities; 228	Anonymous	1944 a
	---; principal vector of plague; 255*	Anonymous	1944 d
	---; ---; 295	Gil Collado	1948 +
	---; ---; 300	Anonymous	1944 f
	---; ---; 333**	Anonymous	1944 j
<i>hirtipes</i> Rothschild	---; ---; 98	Pavlovskii	1927

TABLE 2 - SUMMARY OF DISEASES OR DISEASE ORGANISMS TRANSMITTED BY
FLEAS

SPECIES	DISEASE ORGANISM				DISTRIBUTION
	VIRUS & RICKETTSIA	PROTOZOA	HELMINTHS	OTHER	
<i>CTENOCEPHALUS canis</i>		<i>Leishmania infantum</i>			343
<i>NOSOPSYLLUS fasciatus Bosc d'Antic</i>				Plague	84
				Bubonic plague	336 (Smart 1943)
<i>XENOPSYLLA cheopis (Rothschild)</i>	Typhus fever			Plague	84
				Plague	108
				Plague	255
	Typhus fever			Bubonic plague	333

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I. BUGS

Some bugs or Hemiptera are pests of man in Europe. Some of the species recorded belong to the family Reduviidae.

The table includes only 9 species.

TABLE 1 - BUCS

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>CIMEX columbarius</i> Jenyns	---; ---; 92° ---; ---; 136°	Anonymous	1944a 1944
<i>hirundinis</i> Jenyns	---; ---; 92° ---; ---; 136°	Anonymous	1944a 1944
<i>lectularius</i> Linnaeus	---; ---; 58° ---; common in old houses; 92 ---; in houses; 98, 119°, 244°, 246, 301° ---; experimentally infected with <i>Rickettsia prowazekii</i> , <i>R. conori</i> , <i>R. rickettsii</i> , <i>Coxiella burnetii</i> ; 119 ---; ---; 125°	Dryenski Anonymous Hase Weyer Anonymous	1928 1944a 1941 1962 1944b
<i>NABIS apterus</i> Fabricius	---; bites man at night; 301°	Andre	1931
<i>NAUCORIS cimicoides</i>	---; inflicts painful bites; 140°	Anonymous	1945
<i>OECIACUS hirundinis</i> Jenyns	---; enters houses at night, bites man; 58°	Dryenski	1928
<i>REDUVIUS personatus</i> (Linnaeus)	---; ---; 246°	Nobre	1928
<i>RHODNIUS prolixus</i> Stål	---; experimentally infected with <i>Rickettsia prowazekii</i> , <i>R. mooseri</i> , <i>R. conori</i> , <i>R. rickettsii</i> and <i>Coxiella burnetii</i> ; 119	Weyer	1962
<i>TRIATOMA infestans</i> Klug	---; experimentally infected with <i>Rickettsia prowazekii</i> , <i>R. rickettsii</i> , <i>R. mooseri</i> , <i>Coxiella burnetii</i> ; 119	Weyer	1962

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J. URTICATING AND VESICATING ARTHROPODS

The entries for urticating and vesicating arthropods are few. Only 4 species are listed, all of which cause dermatitis.

TABLE 2 - SUMMARY OF DISEASES OR DISEASE ORGANISMS TRANSMITTED BY
URTICATING & VESICATING ARTHROPODS

SPECIES	DISEASE ORGANISM					DISTRIBUTION
	: VIRUS &	:	:	:	:	
	: RICKETTSIA	: PROTOZOA	: HELMINTHS	: OTHER	:	
<i>PAEDERUS</i> <i>fuscipes</i> Curtis				Dermatitis	109	
<i>littoralis</i> Gravely				Dermatitis	109	
<i>riparius</i> Linnaeus				Dermatitis	109	
<i>rubrothoracius</i> Goeze.				Dermatitis	109	

TABLE 1 - URTICATING AND VESICATING ARTHROPODS

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PAEDERUS</i> <i>fuscipes</i> Curtis	---; ---; 109*	Theodorides	1950
<i>littoralis</i> Gravely	---; ---; 109*	Theodorides	1950
<i>riparius</i> Linnaeus	---; ---; 109*	Theodorides	1950
<i>rubrothoracicus</i> Goeze.	---; ---; 109*	Theodorides	1950

K. TICKS

The tick entries seldom include information on the immature forms separately from the adults. In fact, most of the entries contain only distributional data.

Ticks are important livestock pests in Europe; also, some serious disease organisms are transmitted by ticks.

The tables include 159 species or subspecies.

TABLE I - TICKS

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ALLOCERAEAE</i> <i>inermis</i> (Birula)	---; 58	Buresh & Dryenski	1932
	---; 357	Knuth et al.	1918
<i>AMBLYOMMA</i> <i>clypeolatum</i> Neumann	---; 140	Robinson	1926
<i>dubitatum</i> Neumann	---; 109, 295	Senevet	1937
<i>marmoratum</i> Koch	---; 109	Senevet	1937
<i>robinsoni</i> Warburton	---; 98	Whittick	1939
<i>variegatum</i> Fabricius	---; 109	Hoogstraal	1956
<i>APONOMA</i> <i>komodoense</i> Oudemans	---; 98	Whittick	1939
<i>ARGAS</i> <i>columbae</i> (Hermann)	---; 98	Galli- Valerio	1929
	---; 125	Stylapanopoulo	1925
<i>columbarium</i> Shaw	---; 119	Quittek	1939
<i>persicus</i> (Oken)	---; 6	Anonymous	1944 b
	---; 58, 87, 109, 255	Senevet	1937
	---; 58°	Pavlov	1947
	---; 136	Bos	1934
	In houses, attacks man at night; 255°	Ciurea & Stephanescou	1929
	---; 272, 333	Anastos	1957
	---; 295°	Gil Collado	1938
	---; 301	Galli- Valerio	1915
	---; 333°	Anonymous	1944 i
	---; 336	Cooley & Kohls	1944

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ARGAS reflexus</i> (Fabricius)	---; 34, 255 In houses; 34° ---; 45 ---; 58. Found in houses; 119° ---; 92 ---; 98, 109°, 119, 125, 140, 155 ---; 295* ---; 295° ---; 301	Anastos Anonymous Van Oye Kemper & Reichmuth Christiansen Senevet Gil Collado Gil Collado Anonymous	1957 1944g 1943 1941 1934 1937 1948 1938 1944e
<i>reflexus hermanni</i> Audouin	---; 109, 295	Hoogstraal & Kohls	1960a
<i>reflexus reflexus</i> (Fabricius)	---; 34, 45, 98, 109, 119, 140, 155, 295, 301 ---; 34°, 45°, 92°, 98°, 109°, 119°, 155°, 295°, 301° (Invade houses, active at night and secrete themselves in cracks and crevices during daylight hours, bite is painful and irritating and may be felt for years)	Hoogstraal & Kohls Arthur	1960 1963
<i>vespertilionis</i> (Latreille)	---; 98, 109, 119 ---; 98°, 331° ---; 124 ---; 136, 155, 295, 300	Senevet Arthur MacLeod Hoogstraal	1937 1963 1939 1956
<i>BOOPHILUS annulatus</i> (Say)	---; 155 ---; 333 ---; 357	Cominotti & Di Domizio Babic Knuth et al.	1918 1934 1918
<i>annulatus annulatus</i> (Say)	---; 58 ---; 109, 269	Buresch & Dryenski Senevet	1932 1937
<i>annulatus</i> var. <i>calcaratus</i> (Birula)	---; 109, 255	Senevet	1937

TABLE 1 · TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>BOOPHILUS</i> <i>calcaratus</i> (Birula)	---; 58, 333 ---; 125, 255, 269 ---; 155	Anastos Minning Geigy & Herbig	1957 1934 1955
<i>calcaratus</i> <i>balcanicus</i> Minning	---; 58, 125, 140, 255, 269, 357 May-Dec.; 333	Minning Oswald	1934 1939
<i>calcaratus</i> <i>hispanicus</i> Minning	---; 295	Gil Collado	1938
<i>decoloratus</i> (Koch)	---; 109	Geigy & Herbig	1955
<i>schulzei</i> Minning	---; 58 ---; 269, 357 ---; 333	Pavlov Minning Oswald	1947 1934 1939
<i>DERMACECTOR</i> <i>cruentus</i> Koch	---; 58 ---; 333	Pavlov Oswald	1947 1939
<i>marginatus</i> Sulzer	---; 58, 140, 155, 301, 333, 357. March-Oct.; 119. April; 269 ---; 84 ---; 88 ---; 109, 124, 244 April; 109* ^o ---; 155 ---; 269, 278, 295 (Probable reservoir and vector of the plague and tularemia) ---; 331	Hohorst Schulze Campana- Rouget Anastos Giroud & Colas- Belcour Cavaceppi Arthur Evans	1943 1933 a 1959 1957 1950 1960 1951 a
<i>marginatus</i> <i>lacteolus</i> Schulze	---; 125. April; 269, 295	Schulze	1933 a
<i>marginatus</i> <i>marginatus</i> Sulzer	---; 119	Schulze	1933 a

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>DERMacentor niveus</i> (Neumann)	---; 109° ---; 109, 269, 295 ---; 333	Harant & Baur Senevet Oswald	1947 1937 1939
<i>pictus</i> Herm	---; 58 ---; 88 ---; 119, 125, 140, 244, 255, 333	Brumpt & Chabaud Campana & Rouget Anastos	1947 1959 1957
<i>reticulatus</i> (Fabricius)	---; 58 ---; 88, 98, 119, 155, 244, 295, 331 ---; 98° ---; 109° Experimentally infected with mountain fever; 109 Jan.-May, Aug.-Dec., 109	Buresh & Dryenski Thompson Hirst Senevet Brumpt Gaupillat & Neveux	1932 1964 1916 1937 1933 1925
	---; 124, 301 ---; 140, 255 ---; 333 ---; 341 ---; 357	Arthur Arthur Oswald Geigy & Herbig Knuth et al.	1960 1963 1938 1955 1918
<i>reticulatus</i> var. <i>aulicus</i> Hirst	---; 109	Harant & Baur	1947
<i>reticulatus</i> <i>reticulatus</i> Fabricius	---; 333	Oswald	1939
<i>DERMacentorites pictus</i> Schulze	---; 109	Giroud et al.	1957
<i>HAEMAPHYSALIS beneditoi</i> Gil Collado	---; 295	Gil Collado	1938

TABLE I - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>HAEMAPHYSALIS</i>			
<i>cotopaxiana</i>			
<i>hispanica</i>			
Gil Collado	---; 295	Gil Collado	1938
<i>choledkowskii</i>	---; 58°	Pavlov	1947
Olenev	---; 269	Giroud et al.	1957
	---; 333°	Anonymous	1944 i
	---; 333	Oswald	1939
<i>cinnabarinina</i>	---; 125	Senevet & Caminopetros	1936
Koch			
<i>cinnabarinina</i>	---; 125	Delpy	1938
<i>cretica</i>			
Senevet & Caminopetros			
<i>cinnabarinina</i>	---; 58°	Pavlov	1947
var. <i>punctata</i>	---; 58	Pavlov	1940
Canestrini & Fanzago	---; 84, 92, 98, 109, 119, 125, 140, 155, 295, 357	Senevet	1937
	---; 255	Knuth et al.	1918
	---; 300	Arthur	1952
	---; 331	Macleod	1939
	March-May, Sept.-Dec.; 333°	Oswald	1939
	---; 333°	Anonymous	1944 i
	---; 336	Sharif	1938
<i>cinnabarinina</i>			
<i>punctata</i>			
var. <i>recta</i>	---; 333	Oswald	1939
Oswald			
<i>cinnabarinina</i>			
var. <i>recta</i>	---; 58	Pavlov	1947
<i>concinna</i>	---; 34, 109, 119, 140, 244	Senevet	1937
Koch	---; 58	Pavlov	1947
	---; 255	Metianu	1951
	---; 333	Oswald	1939

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>HAEMAPHYSALIS</i>			
<i>erinacei</i>	---; 109	Senevet	1937
<i>Paveri</i>			
<i>innermis</i>	---; 58°	Pavlov	1947
<i>Birula</i>	---; 58, 125, 333	Anastos	1957
	---; 109, 357	Senevet	1937
<i>leachi</i>	---; 109°	Senevet	1937
(Audouin)	---; 119	Reusse	1960
	---; 333	Oswald	1938
<i>leachi</i>	---; 58	Pavlov	1947
<i>media</i>	---; 333	Oswald	1939
<i>Oswald</i>			
<i>leporispalustris</i>	---; 272	Thompson	1964
Packard			
<i>nizollei</i>	---; 109	Senevet	1937
Larrouse			
<i>numidiana</i>	---; 58	Buresh & Dryenski	1932
Neumann	---; 109	Senevet	1937
<i>otophila</i>	---; 58	Buresh & Dryenski	1932
Schulze			
	---; 88, 155, 333	Hoogstraal & Kaiser	1960
	---; 125, 140	Anastos	1957
	---; 255, 357	Knuth et al.	1918
<i>punctata</i>	---; 58, 125, 140, 255, 333	Anastos	1957
Canestrini & Fanzago	---; 88, 92, 98, 109, 155, 244, 246, 295, 300, 331	Thompson	1964
	Oct.-Nov.; 119	Brumpt	1920
	---; 136, 357	Arthur	1963
<i>sulcata</i>	---; 58	Buresh & Dryenski	1932
(Canestrini & Fanzago)	---; 84, 125, 155, 269, 278	Anastos	1957
	---; 333	Oswald	1939

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>HYALOMMA</i> <i>aegyptium</i> Linnaeus	---; 58°	Buresch & Dryenski	1932
	---; 58	Pavlov	1940
	---; 109°, 125, 140, 155, 246, 255, 269, 278, 295	Senevet	1937
	---; 119, 357	Knuth et al.	1918
	May; 333	Oswald	1938a
	---; 343	Kratz	1940
<i>aegyptium</i> <i>aegyptium</i> Linnaeus	---; 58	Buresch & Dryenski	1932
	---; 357	Knuth et al.	1918
<i>aegyptium</i> <i>impressum</i> Koch	---; 58	Buresch & Dryenski	1932
	---; 109, 357	Senevet	1937
<i>aegyptium</i> <i>margaropoides</i> Senevet	---; 109	Senevet	1937
<i>aegyptium</i> <i>syriacum</i>	---; 58	Pavlov	1947
<i>anatolicum</i> Koch	---; 58	Buresch & Dryenski	1932
<i>cypriacum</i> Schulze & Schlottke	---; 87	Kratz	1940
<i>depressum</i> Schulze	---; 295	Gil Collado	1948
<i>detritum</i> Schulze	---; 58	Brumpt & Chabaud	1947
	---; 125, 295	Hoogstraal	1956
	---; 333°	Oswald	1939
	---; 333	Anastos	1957
<i>detritum</i> <i>dardanicum</i> Schulze & Schlottke	---; 58°	Pavlov	1947
	---; 125, 333	Schulze	1930
	---; 357	Kratz	1940

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>HYALOMMA</i>			
<i>dromedarii</i> Koch	---; 109	Senevet	1937
<i>excavatum</i> (Koch)	---; 87, 109, 125, 155, 246, 295 ---; 295*	Hoogstraal De Prada et al.	1956 1950
<i>ibericum</i> Schulze & Schlottke	---; 295	Kratz	1940
<i>lusitanicum</i> Koch	---; 109, 246, 295	Senevet	1937
<i>lusitanicum</i> <i>algericum</i> Senevet	---; 109*	Senevet	1937
<i>lusitanicum</i> <i>cicatricosum</i> Schulze & Schlottke	---; 295	Kratz	1940
<i>lusitanicum</i> <i>lusitanicum</i> Koch	---; 38, 246, 278, 295	Kratz	1940
<i>marginatum</i> Koch	---; 6, 58, 109, 119, 125, 246, 255, 333 ---; 295*	Hoogstraal Perez Galiardo et al.	1956 1949
<i>marginatum</i> <i>balcanicum</i> Schulze	---; 58 ---; 255	Buresch & Dryenski Metianu	1932 1951
<i>marginatum</i> var. <i>balanicum</i> Schulze & Schlottke	---; 272	Thompson	1964
<i>marginatum</i> <i>brionicum</i> Schulze & Schlottke	---; 333	Schulze & Schlottke	1929a
<i>marginatum</i> <i>espanoli</i> Gil-Collado	---; 295	Kratz	1940

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>HYALOMMA</i>			
<i>marginatum</i>			
<i>hispanum</i>			
Koch	---; 295	Kratz	1940
<i>marginatum</i>			
<i>impressum</i>			
Koch	---; 357	Pomerantzev	1946
<i>mauritanicum</i>			
Senevet	---; 109	Senevet	1937
	---; 295	Gil Collado	1948
<i>mauritanicum</i>			
<i>annulatum</i>			
Senevet	---; 109	Senevet	1937
<i>savignyi</i>			
(Gervais)	---; 58	Anastos	1957
	---; 255	Metianu	1951
	---; 269, 278	Cavaceppi	1950
	---; 295*	Parker et al.	1949
	Bite causes temporary poisoning; 333°	Dojmi	1939
<i>savignyi</i>			
<i>exsul</i>	---; 87	Kratz	1940
Schulze & Schlottke			
<i>savignyi</i>			
<i>ibericum</i>	---; 295	Gil Collado	1933
Schulze & Schlottke			
<i>steineri</i>			
Schulze	---; 58	Buresch & Dryenski	1932
	---; 58°	Pavlov	1947
	---; 125	Schulze	1919
	Experimental transmission of paralysis using eggs containing poison; 333	Oswald	1938
	April-Dec.; 333°	Oswald	1939
	---; 357	Kratz	1940
<i>steineri</i>			
<i>codinai</i>	---; 295	Schulze	1936
Schultz			

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>HYALOMMA</i> <i>syriacum</i> Koch	---; 58 ---; 109, 125, 255	Buresh & Dryenski Senevet	1932 1937
<i>IXODES</i> <i>acuminatus</i> Neumann	---; 109, 155	Senevet	1937
<i>aperonophorus</i> Schulze	---; 98 ---; 109, 119	Anastos Senevet	1937 1937
<i>arboricola</i> Schulze & Schlottke	---; 88, 92, 98, 228, 300 ---; 109 Hollow trees; 119	Arthur Senevet Schulze & Schlottke	1963 1937 1929
<i>arboricola</i> <i>arboricola</i> Schulze & Schlottke	---; 92, 109, 119	Senevet	1937
<i>arboricola</i> <i>domesticus</i> Schulze & Schlottke	---; 109, 119	Senevet	1937
<i>arboricola</i> <i>muscicapae</i> Schulze	---; 300	Schulze	1937
<i>arvicola</i> Warburton	---; 98, 109	Senevet	1937
<i>autumnalis</i> Leach	---; 295	Gil Collado	1938
<i>autumnalis</i> <i>autumnalis</i> Leach	---; 119	Schulze & Schlottke	1929
<i>autumnalis</i> <i>vulpis</i> Pagenstecher	---; 119, 244, 358	Schulze & Schlottke	1929
<i>barbarossa</i> Schulze	---; 119	Schulze	1937

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>Ixodes brunneus</i> Koch	---; 58 ---; 98, 109, 119, 155 ---; 124 ---; 333	Buresh & Dryenski Senevet Macleod Oswald	1932 1937 1939 1939
<i>caledonicus</i> Nuttall	---; 98, 272, 333 ---; 109 ---; 119 ---; 124	Nuttall Senevet Arthur Macleod	1916 1937 1963 1939
<i>caledonicus</i> var. <i>sculpturatus</i> Schulze	---; 109 ---; 119	Senevet Schulze & Schlottke	1937 1929
<i>cavisiaga</i> Johnston	---; 58 ---; 92, 155 ---; 98, 109, 119, 152, 272 ---; 124 ---; 331 ---; 333	Pavlov Arthur Senevet Macleod Arthur Oswald	1947 1963 1937 1939 1948 1939
<i>crenulatus</i> Koch	Tree holes, fox dens, tree hole nests; 119. ---; 357	Schulze & Schlottke	1929
<i>lorriensis-mithi</i> Turk	---; 98 ---; 271	Arthur Turk	1963 1948
<i>irregularis</i> Schulze & Schlottke	---; 109 Tree holes; 119	Senevet Schulze & Schlottke	1937 1929
<i>festai</i> Rondelli	---; 98, 109, 295	Arthur	1963
<i>frontalis</i> (Panzer)	---; 58 ---; 98, 109, 119, 155, 333	Schulze Anastos	1933 1957
<i>frontalis</i> Panzer & Koch	---; 333	Oswald	1938
<i>permelegans</i> Arthur	---; 73	Arthur	1963

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>IXODES hexagonus</i> Leach	---; 45, 109, 152, 246, 272, 301, 331 ---; 58	Nuttall Buresh & Dryenski	1916 1932
	---; 88, 92, 125, 136, 228, 255. All year, Apr.- May, Aug.-Oct.; 98*	Arthur	1963
	Enters houses; 98	Hirst	1916
	---; 98°	Arthur	1953
	---; 109°, 119, 140, 155	Senevet	1937
	---; 124	Macleod	1939
	---; 244	Schulze & Schlottke	1929
	---; 295°	Gil Collado	1948
	---; 295	Gil Collado	1938
	---; 300	Anonymous	1944d
	---; 333	Oswald	1939
<i>hexagonus</i> var. <i>cookei</i> (Packard)	---; 58	Pavlov	1947
	---; 333	Oswald	1939
<i>hexagonus</i> <i>dardanicus</i> Schulze	---; 333	Oswald	1939
	---; 357	Knuth et al.	1918
<i>latirostris</i> Schulze	---; 119	Schulze	1937
<i>lividus</i> (Koch)	---; 98, 109, 119, 272	Arthur	1963
<i>lividus</i> <i>bavaricus</i> Schulze & Schlottke	---; 34, 119	Schulze	1937
<i>lividus</i> <i>obotriticus</i> Schulze & Schlottke	---; 119	Schulze	1937
<i>melicola</i> Schulze & Schlottke	---; 119	Schulze & Schlottke	1929

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>Ixodes nivalis</i> Rondani	---; 109 Foot of hollow oak tree, root hole of beach tree, Feb., Sept.; 119. ---; 244	Senevet	1937
	---; 155	Galliard	1934
<i>pars</i> Leach	---; 98, 109, 119, 120, 155, 331, 333	Arthur	1963
<i>passericola</i> Schulze	---; 109, 119	Senevet	1937
<i>peregrinus</i> var. <i>rothschildi</i> Nuttall & Warburton	---; 98	Nuttall	1916
<i>persulcatus</i> Schulze	---; 119	Anastos	1957
<i>plumbeus</i> Leach	---; 109, 119	Senevet	1937
<i>plumbeus</i> <i>obotriticus</i> Schulze & Schlottke	---; 119	Schulze & Schlottke	1929
<i>plumbeus</i> <i>plumbeus</i> Leach	---; 119	Schulze & Schlottke	1929
<i>putus</i> (Pickard- Cambridge)	---; 98 ---; 109 ---; 272 ---; 331	Olenev	1931
		Senevet	1937
		Hirst	1916
		Nuttall	1916
<i>reduvius</i> (Linnaeus)	---; 108 ---; 152	Yakimoff	1917
		Anonymous	1946
<i>ricinus</i> (Linnaeus)	---; 6 Shady damp mixed forests, protected from sun and wind, grasses, low growing plant zones; 34°	Anonymous	1944b
	---; 34*	Jettmar	1957
	---; 45, 86, 88, 92, 108, 119, 136, 155, 228, 244, 246, 295, 300	Thompson	1964
	---; 58*	Anonymous	1944g
	---; 58°	Buresh & Dryenski	1932

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>IXODES ricinus</i> (Linnaeus) (cont.)	May cause tick paralysis; 84°	Anonymous	1944k
	Widespread, wooded areas, prevalent in spring and early fall; 88°	Anonymous	1944j
	---; 92°, 108°, 125°, 152°, 155°. Aug.-Oct., peak Sept.; 98. May-Oct., peak July; 272°	Arthur	1963
	Very common in hill country, peak July; 98, 272, 331. Causes skin reactions to salivary secretion in man; 124*. Possible transmitter of tick paralysis; 125	Macleod	1939
	---; 98°	Arthur	1953
	---; 109°, 152, 301	Senevet	1937
	Naturally infected and experimental transmission tularemia; 109	Girard	1950
	June; 109	Brumpt	1930a
	---; 119°	Anonymous	1944
	---; 119*	Negrobov et al.	1962
	Naturally infected with <i>Coxiella burnetti</i> ; 119	Reusse	1960
	---; 125 (Thought to be responsible for the transmission of tick paralysis in man)	Anonymous	1944 h
	---; 140, 255	Anastos.	1957
	Bites man occasionally; 155°. Systematic disturbances, vomiting, urticaria occurs in man after bite; 295*	Anonymous	1945 a
	---; 244*	Anonymous	1945
	May-June, Sept.-Oct.; 255	Metianu	1951
	All year, peak June; 272. March-Dec., peak April; 331	Evans	1951
	Peak May-June; 272	Macleod	1932
	---; 300°	Arthur	1952
	Causes tick paralysis; 301*	Anonymous	1944 e
	Mar.-Nov., peaks April-May and August; 331°	Arthur	1948
	March-Dec.; 333	Oswald	1939
	---; 333*	Likar & Kmet	1956

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>Ixodes</i> <i>ricinus</i> (Linnaeus) (cont.)	---; 333°	Anonymous	1944
<i>ricinus</i> var. <i>scapularis</i> (Say)	---; 357	Knuth et al.	1918
<i>ricinus</i>	---; 58	Pavlov	1947
<i>var. scapularis</i>	---; 333	Oswald	1939
<i>rothschildi</i> (Nuttall & Warburton)	April-July; 98, 152, 331	Arthur	1963
<i>rugicollis</i> Schulze & Schlottke	---; 119	Schulze & Schlottke	1929
<i>sciuricola</i> Schulze	---; 109	Senevet	1937
	Damp humus near tree, April, Oct.; 119. ---; 244	Schulze	1933
<i>simplex</i> <i>simplex</i> Neumann	---; 109, 125	Hoogstraal	1956
<i>strigicola</i> Schulze & Schlottke	---; 58	Buresch & Dryenski	1932
	---; 92, 109, 300	Senevet	1937
	Old tree holes, earth nests; 119. ---; 244	Schulze & Schlottke	1929
<i>tenuirostris</i> Neumann	---; 98, 272, 301, 331	Nuttall	1916
<i>trianguliceps</i> Birula	---; 92, 98, 155, 272	Arthur	1963
	---; 109, 119, 124, 301	Senevet	1937
	---; 331	Arthur	1948
<i>unicavatus</i> Neumann	---; 98, 109, 272	Senevet	1937
	---; 331	Arthur	1948
<i>uriiae</i> White	---; 98, 272, 301	Cooley & Kohls	1945
	---; 98°, 108°, 109°, 152°, 228°, 272°, 331°	Arthur	1963
	---; 108, 124, 228	Anastos	1957
	---; 331	Arthur	1948

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>IXODES</i>			
<i>ventalloii</i> Gil Collado	---; 295	Gil Collado	1938
<i>vespertilionis</i> Koch	---; 34, 45, 58, 88, 120, 124, 125, 136, 184, 246, 269, 295, 301, 333	Hoogstraal	1956
	---; 98, 109, 119, 140, 155	Senevet	1937
	---; 152	Nuttall	1916
	---; 255	Arthur	1963
	---; 331	Arthur	1948
<i>vulpicola</i> Schulze	---; 119, 244	Schulze	1937
<i>vulpinus</i> Schulze	---; 301	Schulze	1937
<i>MARGAROPUS</i>			
<i>annulatus</i>			
<i>calcaratus</i> (Birula)	---; 155	Cavaceppi	1950
<i>calcaratus</i> (Birula)	---; 255	Anonymous	1944c
	---; 333	Oswald	1938a
<i>ORNITHODOROS</i>			
<i>capensis</i> Neumann	---; 98°, 331°	Arthur	1963
<i>coniceps</i> (Canestrini)	Enters houses; 109°	Roman & Nalin	1948
	---; 109	Guitel	1918
	July; 109. ---; 155	Lamontellerie	1960
	---; 295°	Gil Collado	1948
<i>delanoei</i> Roubaud & Colas Belcour	---; 109	Senevet	1937
<i>erraticus</i> (Lucas)	Experimental transmission of <i>Spirochaeta duttoni</i> ; 109. ---; 295	Senevet	1937
	Experimental transmission of laboratory strain of <i>Spirochaeta persica</i> ; 109	Pirout & Bourgain	1944
	---; 125	Caminopetros & Triantaphyllopoulos	1936

TABLE I - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>RHITHODOROS erraticus</i> (Lucas) (cont.)	Naturally infected with Spanish Relapsing Fever, <i>Spirochaeta hispanicum</i> ; 246. ---; 295*	de Carvalho Dias	1937
	---; 295	Gil Collado	1938
	---; 295°	Gil Collado	1948
<i>foleyi</i> Parrot	---; 109°	Senevet	1937
<i>laurensis</i> Neumann	---; 333	Anastos	1957
	Possible vector of <i>Spirochaeta hispanica</i> var. <i>peloponnesica</i> ; 341	Pavlov	1944
<i>marocanus</i> Velu	---; 295*	Nicolle & Anderson	1927
<i>moubata</i> (Murray)	---; 45	Van Oye	1943
	Experimentally and naturally infected with <i>Coxiella burnetii</i> ; 11, (Especially susceptible to infection are workers in abattoirs, dairies, wool-carders also in industry, hospitals, tenements and laboratories, causative agent of infection can be dust inhalation, milk, butter, cheese, after-birth and fetal-fluid of animal)	Reusse	1960
	---; 136	Bos	1934
<i>normandi</i> (Larrousse)	---; 109	Senevet	1937
<i>savignyi</i> (Audouin)	Experimentally transmits <i>Spirochaeta duttoni</i> ; 109°	Senevet	1937
<i>talaje</i> var. <i>coniceps</i> (Canestrini)	---; 109°	Senevet	1937
<i>tholozani</i> Laboulebene & Meigen	---; 45	Van Oye	1943
	---; 87*	Wood & Dixon	1945
<i>RHIPICEPHALUS bursa</i> Canestrini & Fanzago	---; 34	Howard	1908
	---; 58°	Pavlov	1947
	---; 58	Puresh & Dryenski	1932
	---; 84, 109, 125, 155, 295, 333	Senevet	1937
	---; 119	Reusse	1960

TABLE 1 - TICKS (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>RHIPICEPHALUS</i> <i>bursa</i>	---; 140, 255, 357	Anastos	1957
<i>Canestrini &</i> <i>Fanzago</i> (cont.)	---; 269	Cavaceppi	1950
	---; 295*	Perez Gallardo et al.	1949
	May-Nov.; 333	Oswald	1939
	---; 333°	Anonymous	1944 i
<i>fulvus</i> (Neumann)	---; 109	Senevet	1937
<i>pusillus</i> Gil Collado	---; 295	Gil Collado	1938
<i>sanguineus</i> (Latreille)	---; 45	Anonymous	1944 a
	---; 58, 125, 333 (Vector of Fievre boutonneuse)	Anonymous	1944 b
	---; 58°	Pavlov	1947
	Carrier of fievre boutonneuse; 58	Anonymous	1944 f
	In houses; 84	Sautet	1936
	---; 109*, 125, 155, 295	Senevet	1937
	---; 109 (May transmit "fièvre boutonneuse").	Anonymous	1944 k
	---; 155		
	Naturally infected and experimental transmission "fievre exanthematique de Marseille"; 109	Durand	1931
	April, naturally infected with <i>Rickettsia</i> <i>conori</i> ; 109	Brumpt	1932
	Jan.; 109	Brumpt	1930
	Larvae inherit infection, naturally infected and experimental transmission of Fievre boutonneuse; 125	Blanc & Cominopetros	1931
	---; 125*	Anonymous	1944 h
	All year, suspected vector of Boutonneuse fever; 155	Anonymous	1945 a
	Vector of Fievre Boutonneuse; 246*, 255*, 343*	Smart	1943
	---; 255°	Anonymous	1944 c

TABLE I - TICKS (conclusion)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>RHIPICEPHALUS</i> <i>sanguineus</i> (Latreille) (cont.)	Inherits and experimental transmission of exanthematic fever, August; 255 ---; 255* ---; 278 In houses; 295* ---; 295* ---; 333° ---; 333 ---; 357 Transmitter of Marseilles fever <i>Rickettsia conori</i> Brumpt; 343*	Combiesco & Zotta Combiesco & Zotta Howard Ruiz & Landazuri Perez Gallardo et al. Anonymous Oswald Brumpt Sharif	1932 1931 1908 1937 1949 1944 i 1939 1920 1938
<i>sanguineus</i> <i>sanguineus</i> Latreille	---; 343	Hoogstraal	1956
<i>secundus</i> Feldman-Muhsam	---; 333	Feldman-Muhsam	1956
<i>simus</i> Koch	---; 109 ---; 125 ---; 155 ---; 357	Geigy & Herbig Senevet Stella Brumpt	1955 1920 1938 1920

TABLE 2 - SUMMARY OF DISEASES OR DISEASE ORGANISMS TRANSMITTED BY TICKS

SPECIES	DISEASE ORGANISM				DISTRIBUTION
	: VIRUS &	:	:	:	
	: RICKETTSIA	: PROTOZOA	: HELMINTHS	: OTHER	
<i>ARGAS reflexus</i> (Fabricius)				Tick fever	295
<i>DEIMACENTOR marginatus</i> (Sulzer)	Neo-rickettsia infection				109
<i>HYALOMMA excavatum</i> (Koch)	Q fever				295
<i>marginatum</i> Koch	Q fever				295
<i>savignyi</i> (Gervais)	Q fever				295
<i>IXODES hexagonus</i> Leach				Tick paralysis	98
<i>ricinus</i> Linnaeus	Virus-Meningo-encephalitis				34 (Jettmar 1957)
				Tick paralysis	34
				Tick paralysis	58
	Neuro-tropic virus infection				119
				Dermatitis	124
				Tick paralysis	244
				Systematic disturbances	295
				Tick paralysis	301
	Meningo-encephalitis				333
<i>ORNITHODOROS erraticus</i> Lucas				Spanish relapsing fever	295

TABLE 2 - TICKS (conclusion)

SPECIES	DISEASE ORGANISM					DISTRIBUTION
	VIRUS &	:	:	:	:	
	RICKETTSIA	PROTOZOA	HELMINTHS	OTHER	:	
<i>ORWITZODOROS</i>						
<i>mircophaea</i>						
Velu						Spanish relapsing fever 295
<i>cholozani</i>						
Laboulbene						Relapsing fever 87
& Meigen						
<i>RHIPICEPHALUS</i>						
<i>bursa</i>		Q fever				295
Canestrini & Fanzago						
<i>canguineus</i>	Boutonneuse fever					109
Latreille						
	Boutonneuse fever					125
	Fievre boutonneuse					246, 255, 343
	Marseilles fever					255
	Q fever					295
	Marseille fever					295 (Ruiz & Landazuri 1937)
	Marseille fever					343

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L. MITES

The entries for mites include a wide variety of species, most of which seldom bite man. For the most part, there are no biological entries. The trombiculid entries are, of course, for larval stages. Most of the others will be various stages, but mostly for adults.

There are 34 species or subspecies recorded in this table.

TABLE 1 - MITES

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ALLOTROMBIDIUM fuliginosum</i> Herm	In gardens near bases of trees, bites viciously especially in shade; 109°	Picard	1927
<i>CHEYLETIELLA parasitivorax</i> (Meigen)	---; 92°	Olsen & Roth	1947
<i>DEMODEX follicularis canis</i>	Causes brown scabs near man's mouth; 301	Lewandowsky	1907
<i>fOLLICULORUM</i> (Simon)	---; 119°	Gmeiner	1909
	---; 155°	Starkoff & Starkoff	1950
<i>DERMANYSSUS gallinae</i> De Geer	---; 119°	Quittek	1939
	---; 336°	Smart	1943
<i>mURIS</i> Hirst	Possible transmitter of fever resembling Marseilles fever; 109°	Marcandier & Bideau	1930
<i>GLYCIPHAGUS domesticus</i> (De Geer)	Found in human urine; 98	Mackenzie	1922
<i>HAEMOLAEAPS molestus</i> Oudemans	Numerous in living quarters; 119, 136, 244	Willmann	1939
<i>LEPTUS autumnalis</i> Shaw	In fields, on river banks, Aug.-Sept.; 109°	Andre	1927
<i>LIPONYSSUS bacoti</i> (Hirst)	---; 98°	Smart	1943
	---; 108*	Pirila & Kilpio	1949
	Indoors, cause itching and blisters; 119°	Willmann	1939
<i>METATHROMBIDIUM porcipes</i> Oudemans	---; 109°	Hirst	1915
<i>MICROTROMBIDIUM autumnali</i> Shaw	Bite causes skin irritation; 98*, 109°	Hirst	1915
<i>pUILLUM</i> Hermann	Sept.; 109°	Andre	1926

TABLE 1 - MITES (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PEDICULOIDES ventricosus</i> Newport	Produces acute dermatitis accompanied by visiculation and fever; 58°*	Anonymous	1944b
	May cause asthma when in nasal mucous membrane of man; 155	Ancona	1923
	---; 155*	Pantaleoni	1921
	Grain, straw; 295°*	Dorado et al.	1946
	---; 333*	Voukassovitch	1939
<i>SARCOPTES minor</i>	---; 136°	Anonymous	1944
<i>scabiei</i> (Linnaeus)	Common; 34°	Anonymous	1944c
	Common, especially in schools and other institution; Anonymous 58	Anonymous	1944b
	Common in houses; 88	Anonymous	1944 e
	Common, causes skin disease in man; 92°	Anonymous	1944 a
	---; 98°	Munro	1919
	---; 119°	Schmidt	1947
	---; 125°	Anonymous	1944 d
	Common; 136	Anonymous	1944
	---; 152°*	Anonymous	1946
	---; 155°	Starkoff & Starkoff	1950
<i>scabiei</i> var. <i>hominis</i> Mégnin	---; 109*	Mandoul	1925
<i>TARSONEMUS floricolus</i> (Canestrini & Fanzago)	Found in urine of man; 98, 152, 301	Mackenzie	1922
<i>TROMBICULA autumnalis</i> (Shaw)	---; 34°, 45°, 92°, 98°, 109°, 119°, 136°, 152°, 155°, 295°, 301°, 333° (All year). Bites man in the fall; 124°	Wharton & Fuller	1952

TABLE 1 - MITES (continued)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TROMBICULA</i> <i>autumnalis</i> (Shaw) (cont.)	---; 34, 45, 92, 98, 109, 119, 124, 136, 155, 301 (Potential vector of pathogenic diseases, troublesome during Aug.-Oct.)	Fuller	1952
	Midsummer and early fall; 34°	Anonymous	1944 c
	---; 88	Daniel	1962
	Lawns, surface of soil, grass and low plants, on the uppermost end or edges of fallen leaves, numerous before dusk, bite causes itching pustules, July-Sept.; 92°	Tuxens	1950
	All year, abundant in summer and autumn; 98, 124, 272, 331	Richards	1950
	Underside of leaves, numerous after noon; 109	Andre	1938
	July-Oct.; 119*	Fuss & Hanser	1933
	Causes severe dermatitis; 140*	Anonymous	1945
	Occasionally on man; 155°	Anonymous	1945 a
	July-Sept.; 301*	Schuppli	1942
	In grass, moss, compost, causes swellings, erythema, urtication and fever, March, Aug.-Oct. and Dec.; 301*	Gasser & Wyniger	1955
	---; 331	Hirst	1925
	Produces intense dermatitis; 336*	Anonymous	1944 b
	---; 358	Mallinckrodt-Haupt	1930
<i>canestrinii</i> (Buffa)	---; 119, 155	Wharton & Fuller	1952
<i>clavicata</i> (Andre)	---; 109	Womersley	1952
<i>desalieri</i> Methlagl	Common in mountain localities in spring; 34	Anonymous	1944 c
	---; 34°	Wharton & Fuller	1952
	---; 155°	Anonymous	1945 a
<i>fahrenholzi</i> (Oudemans)	---; 34°, 119	Fuller	1952
<i>formicarum</i> (Berlese)	---; 109, 119, 136	Womersley	1952

TABLE 1 - MITES (conclusion)

SPECIES	SPECIFIC NOTES; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>TROMBICULA</i> <i>inopinatum</i> Oudemans	---; 109 ---; 336	Oudemans Womersley	1927 1952
<i>moesica</i> (Andre)	---; 333	Womersley	1952
<i>muris</i> (Oudemans)	---; 119	Wharton & Fuller	1952
<i>muecae</i> Oudemans	---; 109, 136	Wharton & Fuller	1952
<i>russica</i> Oudemans	---; 34, 45, 109, 119, 136, 140 ---; 109, 136	Wharton & Fuller Fuller	1952 1952
<i>rustica</i> Oudemans	---; 155	Womersley	1952
<i>vermalis</i> Willmann	---; 34, 119	Wharton & Fuller	1952
<i>xerothermobia</i>	---; 34	Anonymous	1944
<i>TYROGLYPHUS</i> <i>farinae</i> (De Geer)	---; 155°	Starkoff & Starkoff	1950
<i>longior</i> Gervaise	---; 92*	Ditlevsen	1916

TABLE 2 - SUMMARY OF DISEASES OR DISEASE ORGANISMS TRANSMITTED BY MITES

SPECIES	DISEASE ORGANISM				DISTRIBUTION
	VIRUS & RICKETTSIA	PROTOZOA	HELMINTHS	OTHER	
<i>CHEYLETIELLA</i> <i>parasitivorax</i> (Meigen)				Dermatitis	92
<i>LIPONYSSUS</i> <i>bacoti</i> (Hirst)				Dermatitis	108
<i>MICROTROMBIDIUM</i> <i>autumnalis</i> Shaw				Dermatitis	98
<i>PEDICULOIDES</i> <i>ventricosus</i> Newport				Dermatitis	58
				Dermatitis	155
				Dermatitis	295
				Dermatitis	333
<i>SARCOPTES</i> <i>scabiei</i> (Linnaeus)				Scabies	152
<i>scabiei</i> var. <i>hominis</i> Mégnin				Scabies	109
<i>TROMBICULA</i> <i>autumnalis</i> (Shaw)				Dermatitis	119
				Dermatitis	140
				Trombiculosis	301
				Dermatitis	301 (Schuppli 1942)
				Dermatitis	336
<i>TYROGLYPHUS</i> <i>longior</i> Gervaise				Dermatitis	92

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M. MISCELLANEOUS ARTHROPODS

**The entries listed as miscellaneous arthropods are largely scorpions and spiders.
There are only 20 species or subspecies listed.**

TABLE 1 - MISCELLANEOUS ARTHROPODS

SPECIES	BREEDING HABITS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>ACINOPUS</i> <i>picipes</i> Olliff	---; ear of man; 295°	Lopez- Neyra	1935
<i>BUTHUS</i> <i>europaeus</i> Linnaeus	Under stones; sting causes nausea, muscle spasms; 246	Nobre	1928 +
<i>CHrysopa</i> <i>vulgaris</i> Schneider	Larva bites man; ---; 119°	von Frankenberg	1936
<i>GEOPHILUS</i> <i>carpophagus</i> Leach	---; in nasal cavity of man causing headache and vertigo; 109	Laveran & Roubaud	1916
<i>linearis</i> Koch	---; gastro-intestinal injury; 109	Rondeau du Noyer	1928
<i>longicornis</i> Leach	---; in respiratory tract of a woman; 109	Thiry et al.	1932
<i>HAEMATOPINUS</i> <i>suis</i> Linnaeus	---; ---; 124°	Harvey & Hill	1947
<i>HAEMODIPSUS</i> <i>lyriocephalus</i> Burmeister	---; naturally infected and experimental transmission of tularemia; 109	Girard	1950
<i>LATRODECTUS</i> <i>malmignatus</i>	---; ---; 84°	Anonymous	19441
<i>tredecimguttatus</i> Rossi	---; ---; 84° ---; sting causes severe reaction in man; 246° ---; sting produce intense pain and may bring unconsciousness; 333° ---; sting produces muscle pain and severe circulatory depression; 341°	Giamarchi & Sautet Nobre Anonymous Anonymous	1933 1928 + 1944j 1944f
<i>PEDICULUS</i> <i>capitis</i> De Geer	---; may spread typhus and trench fever; 45 ---; possible vector of typhus; 123	Anonymous Hehir	1944b 1923

TABLE 1 - MISCELLANEOUS ARTHROPODS (continued)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PEDICULUS</i> <i>capitis</i> De Geer (cont.)	---; ---; 228°	Anonymous	1944 a
	---; potential vector of typhus; 300	Anonymous	1944 d
	---; ---; 301°	Anonymous	1944 e
<i>corporis</i> De Geer	---; may spread typhus and trench fever; 45	Anonymous	1944 b
	---; ---; 228°	Anonymous	1944 a
	---; potential vector of typhus; 300	Anonymous	1944 d
	---; ---; 333°	Anonymous	1944 j
<i>humanus</i> Linnaeus	---; ---; 124*	Mackenzie	1941
	---; carrier of typhus fever; 125*	Hehir	1923
<i>humanus</i> <i>capitis</i> De Geer	---; common among the poor, both in cities and rural areas; 34°	Anonymous	1944 g
	---; common; 84, 109	Anonymous	1944 l
	---; common; 88	Anonymous	1944 k
	---; ---; 108°	Anonymous	1944 i
	---; ---; 119°	Anonymous	1944
	---; ---; 125°	Anonymous	1944 h
	---; ---; 140°	Anonymous	1945
	---; ---; 155°, 269°	Anonymous	1945 b
	---; ---; 244	Anonymous	1945 a
<i>humanus</i> <i>corporis</i> De Geer	---; ---; 34°	Anonymous	1944 g
	---; common; 58***	Anonymous	1944 f
	---; common, potential vector of typhus; 84	Anonymous	1944 l
	---; common; 88	Anonymous	1944 k
	---; ---; 108°	Anonymous	1944 i
	---; ---; 119°	Anonymous	1944
	---; ---; 125°	Anonymous	1944 h
	---; vector of epidemic typhus; 140*	Anonymous	1945

TABLE 1 - MISCELLANEOUS ARTHROPODS (conclusion)

SPECIES	BREEDING HABITATS; ADULT ACTIVITY; DISTRIBUTION (GENERAL STATEMENTS)	AUTHOR	DATE
<i>PEDICULUS humanus</i>	----; ---; 152*	Anonymous	1946
<i>corporis</i>	----; ---; 244°	Anonymous	1945a
De Geer (cont.)	----; ---; 301°	Anonymous	1944e
<i>PHTHIRUS pubis</i> (Linnaeus)	----; ---; 34°	Anonymous	1944g
	---; ---; 45	Anonymous	1944b
	---; ---; 88	Anonymous	1944k
	---; ---; 108°	Anonymous	1944i
	---; ---; 119°	Anonymous	1944
	---; ---; 140°	Anonymous	1945
	---; ---; 228°	Anonymous	1944a
	---; ---; 244°	Anonymous	1945a
	---; common; 255	Anonymous	1944c
	---; ---; 333°	Anonymous	1944j
<i>SCOLOPENDRA canadiens</i>	---; sting causes pain and swelling; 84°	Anonymous	1944l
<i>cingulata</i>	---; sting is painful and is accompanied by severe local swelling; 140°	Anonymous	1945
	Under stones; ---; 246°	Nobre	1928 +
	---; painful sting which may be accompanied by swelling; 255°	Anonymous	1944c
	---; causes painful sting; 333°	Anonymous	1944j
	---; common, sting is painful; 336°	Anonymous	1944f
<i>dalmatica</i>	---; causes painful sting; 333°	Anonymous	1944j
<i>SCUTIGERA coleoptrata</i> Linnaeus	---; in digestive tract of a child; 109	Rondeau du Noyer	1928

TABLE 2 - SUMMARY OF DISEASES OR DISEASE ORGANISMS TRANSMITTED BY
MISCELLANEOUS ARTHROPODS

SPECIES	DISEASE ORGANISM					DISTRIBUTION
	VIRUS &	RICKETTSIA	PROTOZOA	HELMINTHS	OTHER	
<i>PERICULUS</i> <i>humanus</i> Linnaeus	Typhus					124
	Typhus fever					125
<i>humanus</i> <i>corporis</i> De Geer	Typhus fever				Relapsing fever	58
	Trench fever					
	Epidemic typhus					140
	Typhus fever					152

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13. ABSTRACT The occurrence of insects and other arthropods of medical importance in Europe (excluding the European USSR) is summarized on the basis of a compilation of almost all available references in the scientific literature. The report includes, for each major group of arthropods, a listing of species and subspecies with biological and distributional data, tabulations of diseases or disease organisms transmitted, and complete literature citations.		
The groups of arthropods included, with the number of species or subspecies in parentheses, are: Mosquitoes (363), Black flies (206), Sand flies (42), Midges (115), Horse flies (379), Biting flies (5), Non-biting flies (38), Fleas (330), Bugs (9), Urticating and vesicating arthropods (4), Ticks (159), Mites (34), and Miscellaneous arthropods (20).		

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Distribution		8		8		
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Arthropods		9		6		
Mosquitoes		9		6		
Flies		9		6		
Fleas		9		5		
Midges		9		6		
Mites		9		6		
Ticks		9		6		
Europe		9		6		
Disease Vectors					9	
Military medicine		4				
Diseases				7,9		

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